The New York Medical Times.

VOL. XIII. NEW YORK, MARCH, 1886. No. 12.

ORIGINAL ARTICLES.

ACUTE DEMENTIA.

BY HENRY R. STILES, A.M., M.D., NEW YORK.

DEMENTIA is a term applied to that form of mental derangement which is characterized, more or less, by the enfeeblement of the intellectual, emotional and volitional powers of the mind.

It presents itself to our notice in two forms (1) as a primary, or acute affection—*i. e., de novo,* in a previously sane person; or (2) as secondary to attacks of monomania, mania, and melancholia.

In this paper we propose to deal with *acute* or primary dementia—or that form which arises from original functional derangement of the brain during its years of maximum activity; for it is essentially a disease of youth, rarely occurring after the age of thirty. Both sexes are subject to it, but females mostly, and in them it is generally of a milder form. It may be developed with surprising suddenness—the symptoms reaching their maximum intensity with great rapidity; or, its accession may be gradual, and even with periods of remission, or intermission.

Of the sudden form of attack, the following account of a case, graphically described by Dr. Dickson, in his "Medicine in Relation to Mind," gives a very clear idea:

"In the month of February, 1872, a youth, æt. about 20, was admitted into hospital, who had previously been a patient there, suffering from morbus cordis, and had been discharged as relieved. But the next day he was brought back in a cab, by a policeman who found him in the street, in a fainting condition. He was first taken into a public house, where some brandy was given to him, but when spoken to he did not answer. His mother, who on missing him inquired for him at the hospital, stated that he had left his home without giving any reason for doing so; and he appears to have wandered on until he was exhausted. When questioned at the time of his admittance, he gave no answer, and after being put to bed, it was found that he would not feed himself, and that he passed his motions and his urine under him. He continued for days silent and placid, without making the slightest effort to help himself. He took food when it was put into his mouth, he sat up in bed when lifted up, or in a chair when placed in it; but he did not make the least attempt to move himself, and unless moved from time to time he never altered his position.

"On examination, he was found to be suffering from mitral disease. He was then lying in bed, motionless, silent and placid; he was not insensible, and the calm expression of his face might almost have been considered as intelligent. His eyes moved and his face conveyed an expression of comprehension when he was spoken to; but he did not give assent either by word or gesture. He would look, or stare, but was otherwise unmoved by everything which occurred about him. He did not answer when spoken to; but there was no history or evidence of deaf-mutism, and his emotionless demeanor and the profound silence he maintained, were in the utmost degree singular. I was told that he had been galvanized, the effect of which was to make him scream, but not to induce him to speak.

"When asked to write his name, which he appeared willing to do, he wrote 'George' correctly; but after writing half of his surname he appeared to have forgotten the remainder. He was then shown a watch, and asked what it was, and after much coaxing and persuasion he wrote 'gold.' He was then shown a drinking mug and asked what that was, and in answer he wrote the word 'pot.' He was then asked if he could speak, and he wrote the answer 'yes.' He was then asked if he *would* speak, and he again wrote the word 'yes,' but no persuasion would induce him to utter a single word. He was then offered a shilling, which he looked at but made no effort to take; when it was put into his hand he held it, but without moving his hand; and when asked if he would give it to his nurse to keep for him he made no gesture; when, at last, the nurse was told to take charge of the shilling for him he allowed it to be taken from his hand without the least concern. The case, for some time, appeared like aphasia; but, at length, after an hour's persuasion, he was induced to speak, and answered 'yes' when asked if he understood what was said to him. When asked if he would try to speak, he answered 'yes,' and his face slightly relaxed its cold gaze and became lighted up with a happier expression, which at least signified a willingness to make an effort. When his nurse was pointed to and he was asked who she was, he answered 'nurse.' He promised that he would make an effort and would speak when again

spoken to. It then appeared evident that the organization of the mind was not in any way disturbed, but that its machinery was inactive; there was neither excitation or depression of any mental faculty; there was no mania, neither was there melancholia, nor any manifestation of disturbance of emotion, or volition, or of any perversion of sense or intellect. It was a case in which the mind had come to a full stop. The impression of externals failed to set the currents and trains of thought in motion, and the patient might be described as seeing without observing, feeling without appreciation, and listening without hearing, or hearing without comprehending. There was no lesion of attention, but no impressions were made of sufficient strength to produce comparison, and his mind was an almost absolute and complete blank."

Although this degree of dementia is not always quite as complete as in the case which Dr. Dickson has thus described, yet it is often quite as sudden in its attack, and it is usually quite as definite in appearance.

The symptoms of acute dementia in those cases where its accession is gradual, are somewhat indistinct, and vary so slightly from the patient's normal condition that they often fail to challenge the attention of his friends. They may notice, indeed, that he is quieter and more uncommunicative than is his usual wont, that he evinces less interest in the ordinary affairs of every-day life, business, etc., that he is occasionally careless as to dress and habits, and some of the minor proprieties and conventionalities of life—that there seem to be slips of memory, some relaxation of attention, some moments of blank bewilderment. But these are generally attributed to mental pre-occupation; until these phenomena gradually become more pronounced, and to them is added an evident weakness of the emotions, the usual manifestations of which seem to be strangely reversed; so that matters of serious or sorrowful import call forth most inexplicable peals of laughter and mirth, and tears are shed profusely over the veriest trifles, or upon subjects which to the ordinary mind suggest anything but sadness. But, finally, an attack of excitement, brief but often violent; or, wild and uncalled-for bursts of laughter; swift, purposeless movements, and broken, disconnected utterances, startle the patient's friends into a comprehension of his real condition, and he is placed under asylum care and restraint.

Dr. J. C. Bucknill, speaking of these little "gusts of excitement" which are sometimes displayed during the course of the disease, and which manifest themselves in restlessness, incoherence, mischief, or destructive violence, says that they "suggest an exaltation of mental activity opposed to the idea of dementia. If examined, however, it will be found to correspond with mental weakness"—expressed by garrulity, conveying no intelligent idea, not even delusions or hallucinations, but simply an aimless restlessness, the result of irritation, and subsiding in a few days.

Dr. Charles Aldridge, in his "Ophthalmic Observations" in the cases at the West Riding Asylum, England (iv. 291), says that these little spells of excitement sometimes observable in the early stages of the disease "probably have their origin in some intermittent action of the vaso-motor nerves, permitting sudden rushes of blood into the previously half-filled vessels; for during these periods of excitement we find a relatively increased vascularity of the optic disc and retina, which only holds as long as the excitement lasts."

Following the case in its onward course, we find that the mental symptoms deepen. The psychological activities flag and become more or less suspended. Impressions seem to be but slowly transmitted to, and assimilated by the mind, which therefore obtains only a dim and fragmentary knowledge of external things and events. The faculty of comparison is curtailed; that of cognition cannot be adequately contrasted or integrated; recollection is but feebly developed. As a consequence, therefore, trains of associated ideas and beliefs drag haltingly along, a confused and confusing phantasmagoria, instead of gliding onward in rapid and orderly succession. Imagination abandons its creative work; Desire, which surges so tumultuously in health, now scarcely stirs within; Affection and Passion are dormant, and the Will—either for purposes of knowledge or of movement—has lost all its power.

All this inward debility is, of course, reproduced outwardly by modifications of feature, gait and conduct. Over the countenance steals a perplexed or vacant expression; every pose of the body betrays irresolution or lethargy.

The voice loses its accustomed tone, enunciation becomes low, thickened and drawling; the patient is silent, self-absorbed, answering not and noticing not what is said to him. If aroused he may, after a long pause, answer a few questions correctly enough, but if further pushed in conversation it becomes evident that his ideas are muddled and that he lacks the power to collect or arrange them. He will slowly repeat a question asked him, and if the sentence be a long one he will repeat the three or four closing words—not attempting an answer, but vacantly echoing the question—or will use a word, or a form of words, as a stereotyped answer to all questions. Memory is evidently too feeble to grasp or to hold any impressions. Events, even of a stirring nature, enacted before him, and apparently noticed by him at

the time, fade from his mind as quickly as fades the film breathed upon the surface of a mirror. In reading and writing, words are misplaced or omitted; the names of persons (even of the nearest and dearest) as well as of things, are utterly forgotten; and it has been remarked that substantives, and next to them, numbers, are more readily forgotten than other words. Sometimes he will feebly echo any casual sound, or will drowsily reproduce a gesture which he has seen.

Analogous to these automatic vocal phenomena, also are certain automatic muscular movements sometimes seen in these cases. In fact, with scarcely enough cerebral energy to set the limbs in motion in accordance with feeling and desire, there is yet plenty of a lower order of volition which enables him to keep up for a considerable time a definite series of movements when the latter are fairly inaugurated by some external agency.

When set in motion (walking, for example), he will keep mechanically moving, and will not turn out of his way for anything—a fact which is sometimes utilized by asylum attendants by placing two patients together in order to make them walk. If stimulated to run he will continue to run steadily and rhythmically until stopped by some obstacle.

But, unless thus acted upon by some exterior influence, the patient is averse to motion, and will generally remain, either sitting or standing, in one position, and that often the most uncomfortable, for hours together—moving not, heeding not what is said to him, and will do nothing unless put in the way of it. What little he does is performed in the most slovenly manner. Generally, however, *all* exercise is neglected, and whatever is done is merely imitative and automatic in its character—reminding one of the efforts of a decapitated frog to rid itself of some cause of irritation. The highest centres seem to take no part, only a sensory-motor action remaining, and the limbs perform every effort in a weighty and reluctant manner. Still later in the progress of the disease, the patient will no longer stand, nor will he be induced to take food, which must be placed well back in the mouth to bring it within the influence of the pharynx, where reflex action still lingers. Power over the sphincters is also lost, and care has to be exercised that the bladder does not become unduly distended, which may easily be overlooked because of the continuous dribbling of urine.

Later still, food lodges in the pharynx, and reflex action being almost extinct, we must resort to the stomach pump for alimentation.

The general anæmia is by this time profound, the chilliness and blueness of hands and feet increase, and the extremities seem to be in the condition of a hemiplegic limb cut off by some serious lesion from almost all nervous influence.

But little, if any, reflex action now remains to respond to irritation, and but for the feeble pulse and scarce perceptible heaving of the chest, the patient might be considered dead.

It is, indeed, a state of "profound stupidity," in which, as Dr. J. C. Bucknill says, "Comprehension is abolished; memory a blank; language lost; the sentiments lifeless; the will is palsied, and even animal wants are not attended to. The sufferer is indifferent to all that is taking place around him, and to a great degree insensible to external impressions. For now there is anæsthesia of the surface, with blunting of all the senses."

During this state of things we may notice among the physical symptoms that the *temperature* in the axilla, or rectum, is about normal, but in the chilled hands 12 or 15 degrees Fahr. below that point; the *tongue* is tolerably clean, or swollen, pale in color, and marked on its edges with the teeth. There is always a copious flow of saliva, sometimes dribbling in a continuous stream, owing to an absolute increase of quantity; *appetite* is generally not impaired; the food is sometimes promptly vomited, but this is of intermittent occurrence; *bowels* are apt to be constipated, though brief diarrhœal attacks are not unusual. In females we frequently find present amenorrhœa, rarely leucorrhœa or menorrhagia; and outbursts of excitement are apt to occur at the menstrual period.

The chief danger in these cases is in the direction of pulmonary disease, since in its advanced stages there is a tendency to œdema of the lungs, to pneumonia, phthisis, etc.

We have thus presented you with a *typical* case of acute dementia—sudden in its invasion, unwavering in its progress, and crushing the patient irresistibly and relentlessly to the very verge of what Greisinger has termed "the limitation and degradation of the Ego."

Next, one might expect death. In some comparatively few cases, especially those in which the access of the disease has been sudden and its advance rapid, this happens, but it is usually from exhaustion, or from the supervention of some intercurrent disease, as above noted.

Generally, however, from this point there seems to commence an improvement, the various symptoms clearing up in the order of their accession.

The issue, however, is at first uncertain. With this gradual clearance of the symptoms, the patient may flesh up, the mind brightens, and he comes out well, but blank as to his memory of all that has passed—for he has literally passed through the Valley of the Shadow of Death, and the shadow still lingers

XUM

over him. Watching such a case we can see that while "the spinal cord and sensory ganglions were in action, yet that impressions in them never reached the cerebral ganglionic cells to be perceived, and by being there registered to become part of the memory. The machine was out of gear and no work was done."

Or the patient clears up to a certain point, gets so that he can feed himself again, can assist in dressing himself and pay considerable attention to his surroundings, but gets no farther and drifts into the chronic form, lasting for years, with only death at the end of the vista. It will be seen, then, from what we have said, that acute dementia has a very definite outline, and very characteristic physical symptoms—that it is curable, and seldom terminates in death. That it is not oftener recognized as a disease *per se*, even by the professional attendant, is due, perhaps, to the fact that where it does not result in death it passes into a chronic form, and thus when death ensues, after a series of years, the pathological conditions which are then found throw but little if any light on the previous acute stage of the disease.

There are some other peculiar characteristics of the disease which appear in some cases. Illusions, hallucinations and delusions may be present, but are generally mild and variable in character; speech is incoherent and muttering; destructive propensities are sometimes present, but mostly of an automatic character; knowledge of right and wrong is lost, and in extreme cases natural instincts appear to be abolished; thus homicides are sometimes committed, and self-destruction through ignorance is not uncommon. Loss of decency is a marked feature, "obscene words being used to express their wants or appetites, and acts performed in the presence of others for the doing of which even the most vulgar in a state of sanity seek seclusion, automatically, and as if properly satisfying a natural appetite." Coprophagy, or the eating of excrement, is more frequent with dements than with other lunatics, and this is apparently done, not from illusions and delusions as in the case of maniacs and melancholia, but as if actuated by the same motive as would actuate an infant who puts everything into its mouth in mechanical response to the most powerful instinct of infancy—*i. e.*, the taking of food. It goes without saying, also, that dements form the largest number of that class known in asylum parlance as "wet and dirty."

Physically, the subjects of dementia are generally in good condition; digestion is good, the body suffers little waste or burden from excess of mental agony; they sleep well, usually become fleshy, and when, as Dagonet aptly expresses it, "the individual has become nothing more than a stomach," life may stretch over a number of years.

In the *Etiology* of the disease we must recognize both physical and moral causes.

Among the physical causes are insufficient or improper food, bad housing and unsanitary surroundings, confinement, anæmia and spanæmia either dependent on other maladies, or upon cachectic affections; and it is found that a sudden anæmia is less provocative of acute dementia than that produced by long-continued causes, such as scanty food, impure air, or uterine irregularity. That anæmia which is longest protracted, and which tends to failure of vital powers, is most apt to lead to acute dementia.

The disease is also sometimes the sequel of acute disease, of typhoid fever, of protracted diarrhœa, leucorrhœa, menorrhagia, bleeding piles; sometimes it has its origin in malarial or miasmatic influences, or may be due to a peripheral cause, such as the cicatrix of a wound, or from masturbation, though from the the physical rather than from the moral effects of this vice.

Whatever its form of attack, however, there is always a history of faulty health for some time previous. The patient may have been subject to severe headaches, or to neuralgia of the fifth nerve, or to convulsions in early childhood. At all events, there will be found to have existed some exhausting influence operating during the period of rapid growth. If a male, he may have masturbated; if a female, there may have been some menstrual irregularity (generally amenorrhœa) which will also continue during the attack. Causes which overtax the bodily or mental powers during the period of development, at a time when nature has to perform the double duty of repairing as well as of building up, also tend to this disease. And J. Crichton Browne has observed that it is not always the bright children and youth who are its victims, but oftener the common-place ones of healthy stock. He also considers this disease as less connected with a hereditary taint than any other form of mental derangement. Frequently it seems to arise from superficial conditions special to the individual, such as debilitating occupations, insufficient nourishment, wearisome surroundings, etc., causes which in neurotic subjects tend to excitement and mania, but which in more stolid organizations seem to induce a blunting of the mental powers, or acute dementia.

Primary or acute dementia is oftener due to physical than to moral causes. But, among the moral causes that which is conceded to be the most frequent in inducing the disorder is *monotony of thought and feeling*, or mental inanition. Variety in occupation and surroundings is as essential to the welfare of the mind as variety of food is to the body. Children who are early and long at factory work, wherein "brick walls and reiterative turning ma-

chinery surround them for two-thirds of their waking hours, and where their work consists of a series of incessantly repeated muscular movements, requiring close attention," if they do not become demented, yet frequently show a benumbed mental state. The stupidity of criminals is proverbial, the long confinement benumbing memory and understanding begets (especially in long term prisoners) a morbid mental deterioration which is closely akin to acute dementia. So, also, we find in the British Official Reports for "invaliding" for mental deterioration, that the sailors on the naval stations of the west coast of Africa suffer much from the enforced monotony of their life there: "To them no change is possible for twelve months together, while the incessant rolling of the ship, the constant low rumbling of the heavy surf upon the beach, the tame flatness of the land, fill them with a sense of intolerable weariness."

Excessive mental exertion or emotional excess can also bring on this disease.

The *Pathology* of acute dementia sums itself up as a "general venous congestion, affecting the whole encephalon, but chiefly the frontal and parietal lobes, in which the vessels becoming œdematous from want of tone, cause a pressure upon the brain, which, if long continued, results in atrophy." In other words, it is a condition of cerebral anæmic œdema. J. Crichton Browne notices the analogy between the conditions of the hands and that of the brain. In well marked cases of acute dementia the hands "are blue, livid and cold. Their functions are more or less in abeyance, their muscles weak, their sensibility limited. The vessels, and more especially the capillaries and veins are dilated and relaxed and the circulation languid—in fact, it is a case of diffused chilblains." This, then, is the explanation of acute dementia, that it is a condition of atony of the intra-cranial vessels.

There is a form of melancholia which in many of its stages and symptoms closely resembles acute dementia, and is not infrequently mistaken for it—in fact, by some is considered to be the same disease. This is what is known as *melancholia atonita*, or *atonic melancholia;* or, as the French term it, *melancholie avec stupeur*. Its pathology, however, is different. Want of space, however, will prevent our going into the details of this, or of the relative resemblance of the symptoms in the two diseases.

The *Prognosis* of acute dementia is bad, although not hopeless, for as Blandford remarks, "it may be accompanied by the most profound vacuity, and by abeyance of all the mental faculties, and yet yield to treatment, leaving the patient sane." While some cases recover, however, it is but a small percentage, and we have little reason to hope for such a termination unless the case has a history pointing to a very certain source of excitation, which presents some reasonable hope of combating with food, rest and stimulants. The ordinary asylum treatment, based upon the general principles of good hygiene—*i. e.*, adequate nourishment and stimulation, regular exercise, personal cleanliness and incessant supervision—is a *sine qua non* in all cases.

For, in the earlier stages of the disease, the diminished sensibility of brain, the feeble attention and the utterly barren imagination of the patient offer no field for the operation of so-called *moral* treatment. The depths of the valley of intellectual degradation must be traversed, and the ascent to life begun; then, at just the right moment, the watchful care of the physician should seize the opportunity. For it is then, when the flickering lamp of reason gives an almost imperceptible flare of returning brightness, that a very slight item or thing to occupy the mind, the change from one ward to another, or something to occupy the hands, will turn the balance in favor of recovery. And, alas, the neglect of it may plunge the patient into the irremediable gloom of chronic dementia. Who can doubt that the lack of the watchful eye, the sympathizing word, the slight event which might have turned the feeble current of thought which was beginning to seek its old channels, has left many a mental wreck lying high and dry in the chronic wards of our asylums?

Frequent and abundant nourishment, stimulants, warmth, moderate open-air exercise, not allowing the patient to stand, but keeping him in motion, are absolute requirements, for the blood must be enriched if you would sustain the vital properties of all the tissues and give tonicity to the enfeebled brain, and without this there is danger of pneumonia and phthisis.

Browne uses shower and plunge baths to give tonicity to the vessels, or a free sponge with cold salt water, but prefers the shower as giving a healthy, cutaneous and mental shock, and says that it sometimes acts powerfully as an emmenagogue. Its duration should not be over 10 seconds, and it should be followed by brisk friction.

Electricity, the continuous current, from five to 25 cells, through the brain produces good and almost instant improvement. The patients are not at all sensitive to the current, by which "blueness and coldness of the extremities is mitigated, and the tendency to cataleptic fits invariably lessened." Electricity has been employed to give tone to vessels in chilblains, with Gaiffe's electro-magnetic apparatus, with a middling interrupted current, the positive pole being placed near the inflamed spot and the negative on the spot, 10 or 15 minutes daily sufficing.

XUM

The therapeutical treatment consists in the use of iron and quinine, or a combination of iron, phosphorus, zinc and strychnia, to restore lost nerve tone.

Mann recommends, to prevent brain-wasting—especially in those cases which have followed exhausting diseases—the chlorophosphide of arsenic (Routh's formula) as invaluable, five drop doses in water (gradually decreased to two) three times a day, and persisted in for months.

We also have at our command a number of other remedies which cover well the features of acute dementia. These remedies are much in the same line as those which we should think of in melancholia, but we can only refer to them here by name, viz., alcohol, ambra, anacardium, antimony, arsenic, belladonna, crocus, hyoscyamus, iodine, lachesis, opium, secale, stramonium, nux moschata, veratrum alb. To our mind the last named best covers the symptomatology and pathology of the disease.

Dr. Talcott, of the Middletown Asylum, in his Medical Notes on Treatment of Mental Diseases, says: "Our dementia cases have been treated with calc. carb., phosphorus, anacardium and a few other drugs. An improvement in their general condition has often followed the use of the above remedies, and we look upon such cases as affording a somewhat hopeful field for future experiment and research. Still we are unable to record complete recovery from dementia through medication, except in a very few cases."

In his last Annual Report (1885) of the Asylum, Dr. T. says: "For dementia we rely upon anacardium, apis., calc. carb., calc. phos., hellebore, kali iod., mercurius, mercuric methide, and podophyllin."

PHYSIOLOGICAL STUDIES OF DIGESTION AND ITS FAULTS.

BY GEO. H. TAYLOR, M. D., NEW YORK.

THE SECRETIONS.

GENERAL SURVEY OF DIGESTION.—The whole interior surface of the elongated membranous tube of varying size whose walls bound the digestive cavity, under proper or physiological conditions, pours forth or secretes into the digestive cavity a large amount of fluid, to be mixed with the ingesta. The secretory power *appears* to reside at the surface of the membrane, in a variety of glands located just beneath the surface and opening upon it, and in large glandular organs annexed to the digestive organs and communicating by outlets into the same cavity, and subject to similar physical conditions of admixture and its consequences.

The ingesta proceed slowly in their course along the walls of the digestive cavity, much impeded by its turns, folds, and windings; the detention secures more intimate and certain admixture with the secretion, required for the full effect of the mutual contact of ingesta with secretions. This effect is the gradual fluidizing of the ingesta, or certain selected portions of them, and the immediate disappearance of the resulting mixture of secretions and fluid ingesta from the digestive cavity. The fluid thus produced by the inter-action of secretions and food has received the distinguishing appellation of *peptone*. It passes into the venous capillaries and lacteals, very abundantly distributed to the digestive walls for the purpose, and is directly conveyed by these to the general circulation, whereby it is distributed to the system at large, or to such points of use as may be determined by functional activities.

The three principal ingredients of ingesta which the organism employs for its support are quite dissimilar in their physical characters, and in the way they respectively reach points of vital destination. These ingredients are those of the amylaceous or starchy series, the nitrogenized series, and the oily series, each of which is represented by varieties. These ingredients require differing qualities of secretions for their reduction to the fluid state, and the secretions adapted to any one kind is without digestive effect on the others. These ingredients are therefore subjected to separate processes, by means of distinctly differing secretions, at different local points in the progress of the digestive act. After the separate digestion has considerably progressed, and a large part of the ingested material has become available for nutritive uses, the remaining portions are commingled, and the whole subjected to the influence of additional secretions in the narrower passages of the digestive cavity, by which a further amount of peptone is secured for absorption and for nutritive uses, provided more should be required.

The physiological facts well established by modern experimental physiologists, obtained mostly by isolating the secretions of the different parts of the digestive organs, and observing their effects on the ingredients of food, are of importance in a therapeutic light, and may be briefly stated.

The secretions from the glands of the mouth are weakly alkaline, and contain a peculiar albuminous product called *ptyalin*. This has the power to cause starch coming in contact with it instantly to take an addition of oxygen and hydrogen in the proportion of water, in which act the starch disappears and is replaced by a form of sugar, thus becoming entirely soluble, and ready for immediate absorption into the system. The secretion is poured forth in response to the incitation of the nerves affected by taste and

smell, and in some cases as the effect of the imagination on the nerves connected with the salivary glands. It is further incited by the mechanical action of the mouth in masticating food. Large quantities of saliva are also secreted and swallowed, for the probable purpose of continuing the same digestive effect at whatever point the secretion may meet with unconverted starch.

The stomach is the next segment of the digestive cavity in which the ingesta are detained. The walls of this organ afford an abundant and strongly acid secretion, containing another peculiar albuminous principle called *pepsin*. The combined effect of the pepsin and the acid is to render fluid certain albuminous forms of food, as fibrin, gluten, casein, and all such nitrogenized matters as are capable of serving nutritive uses. The alkalinity of the salivary secretions is neutralized, and their converting action probably suspended. The stomach secretions have no effect on starch. The results of digestion of the nitrogenized food, which is the mixture of secretions with fluidized food, or peptone, disappears as rapidly as produced, leaving the contents of the digestive cavity always of the same pulp-like consistency.

The duodenum, the digestive segment into which the remainder of the ingesta next enters, is an arena for complicated digestive activities. Unlike the stomach, the secretions are disengaged by large special organs, quite removed from the cavity; these are the pancreas and the liver. The former provides a special alkaline secretion, which in connection with the alkaline qualities of those from the liver with which the pancreatic fluid is intermingled, becomes capable of preparing the fatty and oily parts of food for entrance into the circulation, ingredients which up to this point have been wholly unaffected by the digestive process. For the same reason the ingredients of food, whether starchy or nitrogenous, which have been mechanically protected by coatings of fatty matter so as to resist the secretions adapted to their digestion in the mouth and stomach, the appropriate points for such digestion, are now exposed by the action of the alkaline fluids of the duodenum. These newly-exposed nutritive matters, therefore, require the action of the digestive fluids at this and the succeeding portions of the cavity to complete the process.

The fact now stated affords an important hygienic and even therapeutic inference. This is that difficulties of this portion of the digestive process are ameliorated by caution in the use of preparations of food which have the oily and farinaceous portions too intimately combined, as in that case the oily protection prevents access in proper quantity of the kind of secretion adapted to digest the other ingredients, thereby exposing them to causes of spontaneous chemical change.

The other large secreting organ referred to, the liver, has other important functions than that of assisting the alkalinity of the duodenal digestion. Its principal function is that of separating from the blood flowing through it such matters as require further action of the digestive process to render them available as nutrition instead of becoming waste. These matters are variable and complex in consequence of the varying degrees attained by the oxidizing functions in the organism. The liver, in short, removes sub-oxides from the blood, but not from the organism; it adds them to the ingesta, and thus affording these otherwise useless matters the opportunity of becoming nutritive. The liver also prepares a portion of the material thus received from the blood for oxidation by converting it into a kind of sugar, which has received the name *glycogen*.

These well proved physiological facts relating to the functions of the liver have the effect of upsetting a good deal of the therapeutics of former times, when most of the difficulties to which human flesh is heir was ascribed to this recalcitrant organ. Every plausible opportunity was sought to disturb, fret and punish the liver, the great obstacle to health. Now it is well understood that the liver is able to remove only a limited amount of the sub-oxides which may exist in the blood, and that the excess must wait further oxidizing effects, or become a cause of disturbance. The disability often attributed to the liver is, therefore, only a part of the general effect of the want of proper relation between the alimentive and the oxidizing or using functions. Regarded as a question of physics, the health suffers from excess of partly used material awaiting elimination by means of further oxidation.

The extended portion of the digestive cavity below the duodenum serves to increase the digestive space, increase its surface, prolong the process and extend the facilities for the absorption of digested matters. The digestive powers afforded by this portion of the digestive organs are availed of in proportion to the exigencies of the system. Nutritive material is further digested and absorbed into the system, or urged forward and excluded, according to the current needs for nutritive support. Accordingly, fresh additions of digestive fluids are made and mixed with the contents of the cavity if more nutriment is demanded by functional activity, and withheld if unnecessary. This portion of the digestive organs, unlike the mouth and stomach, is so far removed from the influence of the will, the imagination and the sensory nerves, that the secretions are uninfluenced thereby, and are therefore necessarily controlled only by the laws described further on.

XUM

AMOUNT OF DIGESTIVE SECRETIONS.

It has been the purpose of a great deal of the patient and careful investigations of experimenting physiologists to determine, approximately at least, the amount of secretions required by a healthy man daily to take up from the digestive cavity the amount of food substance necessary to maintain the usual outflow of his energies. Both the lower animals of several species, and in a few cases the human kind, have been subjected to experimental observations serving to determine these relations. The conclusions accepted are of great interest in a hygienic as well as therapeutic view, and may be here briefly stated as germane to the present subject.

Dalton summarizing the estimates of the leading authorities, states the aggregate of the principal digestive secretions in man, excluding mucus, to average a little less than fourteen pounds, in each twenty-four hours. This amount is proportioned as follows (in grammes). Salivary secretion, 1,280; gastric juice, 3,000; bile, 800; pancreatic secretion, 1,100. The secretions below the pancreas, which include the greater extent in length of the digestive tube, being difficult to ascertain by experiment, are omitted. This part is well-known to pour forth large quantities of fluids under the irritation caused by disease, but the conflicting results of experiment on animals, indicate its great physiological irregularity.

Lehman states the aggregate quantity as considerably greater. This learned and critical observer gives authorities showing that from one-fourth to one-fifth of the whole weight of the body, reckoned as water, and from one-sixtieth to one-seventieth, reckoned as dry substance, returns to the digestive cavity every twenty-four hours, in the form of secretions. The whole of this quantity is re-absorbed with the addition of the solid portion of the ingesta which has been liquefied and taken up by these secretions in the same period of time.

The dry solid matters returning to the digestive cavity in the digestive secretion, amount, according to the best authorities in physiology, to more than two pounds avoirdupois. Martins, quoting Moreschott, states the aggregate of daily food, *dry*, as being about 1¼ lbs. An equal or larger amount of oxygen is introduced by respiration. The points of interest in this connection are the very large amount of the fluids of the organism that are required to induct new material; the large proportion of solids returning to the digestive cavity in proportion to the solids dismissed daily from the system; the definite nature of digestion at different points of the organs of digestion; the duplicate nature of the source of the peculiar powers of the digestive secretions a part of these peculiarities arising in the organism, and a part at the secreting organs.

SOURCE OF DIGESTIVE SECRETIONS.

The slightest reflection shows that the digestive walls and glands therewith connected are of themselves incapable of supplying the secretions flowing so abundantly into the digestive cavity throughout its entire extent. These are the *channels* through which the secretions arrive at the cavity, which are ultimately derived from the system at large. The immense disparity between the amount of these secretions and the amount of substance of the digestive organs to which they are attributed, renders it evident that these organs are not their real source; the nature of the tissues of these organs is further evidence of the same fact. These parts are composed largely of connective and of muscular tissues and of mucous and serous membranes; the remainder consists of blood vessels very intimately reticulating with the secreting glands through which the secretions pass into the cavity.

The digestive walls are therefore the mechanical rather than the physiological base of the digestive secretions. They surround and sustain the contents; and exercise the same office for the blood vessels, the lacteals and the vital cells of the glands. Some portion of the secretion in passing these cells is so modified as to become adjusted to the local digestive needs. The material itself is derived from all, including the remotest parts of the organism. The blood passes in continuous streams through the capillaries of the digestive organs, yielding to the digestive cavity such portions as are demanded by physiological law, much the same as the muscular and other functions of the body are maintained from the sanguineous currents passing through the local-capillaries of the functional organs.

TO WHAT THE SPECIAL QUALITIES OF THE DIGESTIVE SECRETIONS ARE DUE.

It is a grave practical error to conclude that the powers of the digestive secretions are wholly due to the special products of the local secreting glands situated along and communicating with these organs. The reasons for this statement will appear from the following considerations.

The digestive secretions are derived through the blood from every part of the organism, and the function of these secretions is that of intermediary for the support of two classes of vital activities. One may be regarded as the general activity to be explained in another connection, and relates to the needs of the whole; and the other consists of the special activities and relates to expenditure of special organs and parts.

Now, the blood which contributes to the digestive secretions is composed in part of new material derived from the digestive cavity, but far more largely

consists of nutritive substance related to the organism in various ways; by contact, having circulated through the organs; by having in part composed the interstitial fluids in contact with vital organs; by having become changed in quality through losses in supporting local nutritive activities; by changes of quality from accessions, contributed local nutritive activities. These changes in the qualities of the blood of which the digestive secretions are composed should be compared with those which give peculiar local qualities to the secretions. Those peculiar local products, as those of the gastric juice, are rationally far inferior in amount to those above mentioned derived from the general vital activities of the organism. It has also been shown by physiologists that the special characters, as the pepsins and the acids, are not fully developed within the glands, but respond to chemical tests only at the surface of the digestive membrane.

It may therefore be concluded that the digestive secretions representing all parts of the organism are adapted to indicate, in the solvent power they exercise, the deficiencies and therefore the needs of the organism and of its various local parts, and that, in the natural course of things, such nutritive matters and such only, are taken up by these secretions and conveyed by them to the blood, and thence to the various local parts requiring nutritive support.

The physiological principles above stated as to the source of the qualifications of the digestive secretions to extract from the ingesta the special requirements of the functional parts, though incontestable, admits of approximate demonstration in instances like these. The growing child extracts from aliment such salts of lime as are required for the development of its osseous frame. These are excluded with waste in the case of animals fed on the same food which do not require that special ingredient; and which in cases of certain disorders of nutrition, may be excluded to the detriment of growth. That starchy and oily substances are extracted from the digestive cavity or allowed to remain as waste products, according to the rate of waste due to loss of heat, and other circumstances, has often been proved.

The experiment has frequently been made by physiologists of feeding an animal on an abundance of food restricted in respect to variety or quality, as oil or sugar; the result of which is death, affords a negative illustration of the same principle. The impossibility of human existence rising above a certain low level of development of the nervous system when confined to exclusive animal food, which is an instance of excluding all nutritive material except that which was usable by the animal fed upon, is a still further negative illustration of the physiological principle now brought to view.

THE DIGESTIVE SECRETIONS THE MEASURE OF HEALTHFUL DIGESTION.

This inference would appear to be inseparably associated with the fact that the secretions are adapted in *quantity* to supply the required support of the organism and its parts. The expending organs send forth their orders to the digestive cavity, in the different ways above pointed out, till such support is approximately secured; then, only, the feeling of satiety is experienced and then no more secretions appear. Additions to ingesta are now made at the peril of health. It must be added that the *feelings* will afford trustworthy indications of need only in case of unimpaired health, for in ill health, especially of the chronic variety, the source of the feeling is also impaired, and therefore untrustworthy.

This fact of equivalent proportions between the digestive secretions and the current needs of the organism for nutritive supply, is well illustrated in acute disease, and verified by almost every one's experience.

The loss of appetite in these cases is the concomitant of withheld secretions. The functions of expenditure, especially those of the principal modes of expenditure, as heat and muscular power, are very much diminished or temporarily cease. There is chilliness, and incapacity for exertion of any kind; consequently little or no digestive secretion is afforded. Even the mouth often remains dry; the salivary secretion, which it is well-known are also influenced by the will and by the incitation from contact with and the flavors of food, fail to afford the usual amount. The lower digestive organs, which are more completely governed by the current needs of the organism, fail to supply the usual secretions of health. Under these circumstances, large and frequent potations of water are required, partly to replace the watery products of digestion, also compensating for water produced in health by the chemical changes incident to vito-chemical processes.

The proposition that the digestive secretions are proportioned in amount to the amount of digested products required by the system, is further enforced by rational considerations. The absence of this relation would immediately involve the vital system in fatal difficulties. For, if the secretions were arbitrary or under control of the will, or entirely dependent on incitation at the digestive centres, and not by instruments of expenditure, deficiencies of secretions might occur, and the body would famish. On the other hand, if the will or the sensations exercised supreme control, or if the relation between need and supplies through digestion were accidental, then the organism would be exposed to still greater embarrassments, arising from the pressure of excess. To properly

understand the consequences of excess of secretions, or digestion beyond the requirements of functional activities which cause expenditure, it will be necessary to recall to mind these principles of physiology, viz., that energy expended necessitates and represents definite chemical changes of nutritive substance to the extent of the expenditure, since in no other known way is energy dissociated from matter. These actions are in no wise indefinite and arbitrary. Such changes of matter also necessitates and superinduces a corresponding act of replacement which is exactly equivalent. The act of replacement extends potentially to the digestive cavity, and implies the use in this cavity of the amount of digestive secretion required to effect the solution of, and transport through the circulation, the same definite nutritive equivalent.

Should the due amount of secretion be exceeded, then an indefinite excess of nutritive material is gained; but this is necessarily and absolutely inert and unusable. Under circumstances to be hereafter explained, this excess may for a while be tolerated, waiting occasion for use; mean time, however adapted to nutritive uses, until so used it is, in fact, idle material, and unrelated to the uses made by the organism of nutrition. If, therefore, nutritive matters be actually introduced beyond the digestive walls in a surreptitious way, such matters are by no means certain to find employment.

A more probable consequence of local incitation of the digestive organs, is to hasten but not to increase the secretions. The desired effects are apparent and temporary, not real and permanent. They imply no automatic, self-perpetuating and healthy consequences. If these follow, it is from other causes than those to which these referred. The effects are therefore deceptive, and unconnected with conditions necessary for the continued healthy performance of digestive acts, which are always in close connection with those of expenditures. But in case of local irritation of the stomach the transuding secretions soon exhaust the power of the secreting glands; as muscles or nerves suffer from over-excitation and are consequently enfeebled, not strengthened, to be restored only by succeeding periods of rest. Frequently repeated local irritation creates a habit, demanding consequent increasing piquancy of the incitant, and less and less amenability to normal incitation due to the systemic needs. In this way the digestive powers come to suffer the permanent disability and demoralization witnessed in so many sufferers, who insist on goading the stomach, instead of inquiring whether the system is properly using its supplies. These sufferers forget that nutriment is properly not for the stomach, through which it is inducted to the vital parts, but for the acting parts and functional uses.

CLINIQUE.

GOUT.

BY F. S. FULTON, A.M., M.D., NEW YORK.

THE dietetic and medicinal treatment of gout is a question over which many hard-fought battles have been waged. The very large majority of our text-books hand down the customary and legendary treatment of abstinence from meats and adherence to a vegetable diet, basing their ideas upon the supposed greater tendency of an animal diet to favor the development of any disease which depends upon the uric acid diathesis. Meats are supposed to increase the production of this particular *materies morbi* through the easy transformation of their albuminoid constituent into uric acid. Vegetables not possessing these to a like extent have been recommended upon the starvation principle.

But if the proper pathology of gout is some morbid condition, regarding which no definite decision has been reached, of which the expression merely is the increase of uric acid in the blood, while its presence is not in any manner the disease itself, it is not safe to attribute to an animal diet that which may be the result of other pathological processes. Moreover, it has been ascertained by certain investigations, that while the carnivorous animals are scarcely or never known to be affected with gout, the birds which subsist very largely upon vegetables and fruits often contract this disease, showing that a flesh diet *per se* does not predispose to gout. The current idea that the contrary is true originates largely in the fact that individuals who are visited with this aristocratic affliction are persons of a full, vigorous habit, who regard indulgence at the table as one of the great pleasures of existence, and to whom abstinence from epicurean delights is synonymous with abject wretchedness.

Viands of every conceivable description help to fill the measure of their satisfaction, and also, in the minds of others, stamp their diet as one exclusively animal. We must remember that wines, liquors, late suppers, lobster and other indigestible salads, and often protracted dissipation in a fashionable manner, are of as much and, from a pathological standpoint, of more importance in completing the sum total of their regimen as an animal diet.

In the condition of the general health, bodily strength, state of the blood and urine, there is much to show that the proper pathology of gout is, not the presence in the system of a free and superabundant quantity of uric acid, but a diseased condition of the various organic structures of the body by which too great tissue change and waste is induced. This excessive tissue change, resulting, as in all cases, in a

great production of effete material, is manifested by the accumulation within the system of this diseased material, which is urea appearing according to its combination, generally as uric acid or urate of soda. Urea is always the product of tissue change. It is not taken from the digested aliments and excreted by the kidneys directly without intervening metamorphoses, but the various tissues select from the mixed pabulum offered them by the blood, with more than human judgment, the nourishment peculiarly adapted to their sustenance. This nourishment becomes by protoplastic activity an integral portion of this tissue, serves its function of giving it organic power and is then quietly excreted and thrown out for the general scavenger of the body, which is the blood, to gather up and convey to the kidneys, to be finally extruded from the body. Urea does not appear in the body outside of this peculiar process. When it does appear, therefore, in too great quantity and we can successfully demonstrate that the kidneys secrete very nearly if not quite their normal amount of urea in its various combinations, the only conclusion is that it appears from too great tissue change. The blood in chronic gout is of much lower specific gravity than in health and also possessed of a smaller amount of albuminoid constituents. It is easy to explain this condition upon this theory, which is that the diseased process is located in the tissues themselves, and that this process is a too great molecular and protoplastic activity resulting in too great a consumption and consequent too excessive waste. The blood sustains too great a drain upon its nutritive properties by reason of this increased consumption in the tissues of the body. It consequently becomes poor and thin. The waste occasioned by this perverted activity is thrown into the blood in greatly increased quantities and the kidneys not being able to eliminate such an amount, it is stored up within the system to be manifested in the blood.

If this be anywhere near a correct theory of the proper pathology of gout, it is evident that the ordinary treatment by restriction of animal and adherence to a strictly vegetable diet must be grossly at fault.

Increased consumption necessitates increased supply. If the albuminoid constituents of the body are rapidly eliminated through a pathological activity of the cell constituents of the body, draining the blood of its nutrition and rendering it incapable of supplying the demand, the indication is to replenish the blood, that it may supply to hungry protoplasm enough to satisfy its demands. The argument which might be advanced that this method would simply result in a greater consumption and consequently increased accumulation of uric acid in the system and thus augment rather than diminish the trouble, we believe to be fallacious. All medicines, especially those which act physiologically, supply a certain lack, within the system, of vital energy in some of its different manifestations. The nutrition remedies are especially so. They are food for the system as much as steak or oatmeal. Not only do they act as nutritive elements to be absorbed and deposited in appropriate portions of the organism, but they also act by what appears to be a catalytic method, stimulating the organs to supply by natural methods the physiological lack and to throw off the diseased condition for which the medicine itself was given. As, for example, in a child in which the fontenelles manifest no tendency to close, and when the child is poor and anæmic. Under the administration of the lime preparations they will often close with very much greater rapidity than can possibly be accounted for by the deposition of the lime taken into the system. A similar fact is observed after the administration of iron in cases of anæmia or chlorosis, or china in cases of depletion.

In the same manner animal food appears to act in at once supplying a physiological lack and also stimulating the organs to a natural activity, so that while the demand of the system is supplied, the tendency to production is also lessened.

In practical results this method of dietetics is as satisfactory as in theory. Numerous cases of chronic gout have come under our observation and in each of these a similiar course of dietetic treatment has been pursued.

They are placed at once upon an exclusively animal diet, with what eggs and milk they may desire.

They are given steak with eggs and milk three times a day, beef tea, chicken or mutton broth in the middle of the morning and afternoon. Also about an hour before each meal, and on retiring they drink at least a glassful of as hot water as they can endure. This treatment is kept up steadily. All pastries, wines, condiments, tea and coffee are prohibited. Hominy or oatmeal is sometimes allowed for breakfast.

The medicinal treatment varies with each case. The medicines together with their indications which have been found to be of the greatest value are the following:

Gnaphalium.—Intense pain extending from the back or hips downward along the course of the sciatic nerve. Pain occupying the posterior surface of the leg, extending down to the great toe. Numbness alternating with the pain.

Xanthoxylum.—Pain extending downward along the course of the anterior crural nerves.

Pain in the back extending down the anterior surface of the thigh. Tingling sensation as an electric shock passes down the limb.

Ledum.—Pain in the limb, starting in the foot and extending from below upward.

Pain, sharp and stinging in the foot. Gouty nodosities. Dull, heavy pain in the hip. Feels it but little if does not stand or walk upon it. Greatly aggravated by walking or standing upon affected limb. Sore, bruised pain in the soles of the feet and great toe on walking.

Lactate of Lithia.—This drug appears to act most favorably after the more acute symptoms and pains have been allayed by other drugs, when swelling with but little sensitiveness or pain remains. The drug prefers the larger joints, as the knees, hips, and shoulders.

Stiffness and soreness of affected parts.

It stimulates the kidneys to an increased secretion of uric acid and this helps to unload the system.

Ruta Graveolens.—Pain as if beaten, lameness of the spine. The limbs feel bruised and sore. Hamstrings feel shortened. Pains in the bones of the feet; cannot step heavily upon them All parts of the body feel bruised on lying upon them, with the characteristic symptoms of the eye.

Benzoic Acid.—Dr. Hering, as quoted by Dr. Hughes, says that "the more benzoic acid is used in gout, the more it will be prized." We have used it in cases of chronic gout with nodosities upon the fingers and toes. It is useful for similar conditions in rheumatoid arthritis. Sharp pain in the hip or knee, swelling of the joint, very little redness or discoloration. Pains shift about, much like the typical Puls.; pains, now in one knee, now in the other, or shooting down to the ankles or phalangeal joints. Stiffness of the joints. Intense pain in affected joint at night; urine often of very strong odor, with burning and pricking on micturition. Burning in the kidneys, irritability of the bladder, muco-purulent discharge caused largely by urine remaining in the bladder too long, from enlarged prostate or other mechanical reasons, and decomposing, or from a too excessive alkalinity of the urine causing a deposition of phosphates within the bladder, with granular mucus and pus tending to formation of phosphatic calculi.

Colchicum.—Particularly useful in the paroxysms of acute gout, at which time it appears to exercise somewhat of a specific action when given in liberal doses of the tincture. Laming pains in the extremities, with paralytic sensation. Patient can scarcely retain his grasp of any article, or stand, as fingers and limbs seem to have lost their strength.

Tearing pains in the joints and calf of the limb. Gastric disturbance; sight and still more the smell of food nauseates the patient. Pains rapidly shift from one locality to another. Numbness and tingling of limb. Sour sweat suddenly coming and going.

Baptisia.—Patient in low state of vitality. Furred tongue, offensive breath, high-colored and offensive urine. Great sensitiveness of all parts. Patient dreads the approach of his physician or the slightest jar or movement, for fear it will hurt him.

Eupator. perfol.—Intense bone pains, little or no perspiration, chilliness followed by vomiting. Intense aching of the muscles, which feel crushed. Wrist and ankles ache as if dislocated.

Bryonia—Joints of affected limb hot, red, shining and exquisitely painful. Pain aggravated by least motion or touch. Great weakness of the limbs. Can scarcely stand or walk. Pains remain located in one place, do not shift as in Puls. or Benzoic acid. Weariness and heaviness of all the limbs. Stiffness of joints with sharp or bruised pains on motion. Great dryness of the mouth and lips, great thirst, sensation of weight and oppression in the stomach. Flatulency with constipation without desire for stool.

Phytolacca.—Dull, heavy, aching pains in the joints. Deep periosteal bone pains in the tibia. Sharp, stabbing pains extending from hips downward mainly upon the outer side of the thigh and leg. Pains aggravated at night or in damp weather. Joints are hot, swollen and red. It is particularly indicated if there be any symptoms or history of syphilis.

Other remedies as nux, lach, lyc., cimicifuga, calc. carb., iodine, puls, merc. sol., rhus tox, sulph., and thuja all have their application at various times. The symptomatology upon which they would be given is too well known to require notice. As in intermittent fever, so in gout, there appears to be no specific. Individualization of the case and careful comparison of symptomatalogy and drug pathogenesis together with careful dietetic treatment will, we are convinced, relieve many cases which have long defied all methods of cure.

ERYSIPELAS.*

BY T. M. STRONG, M. D., WARD'S ISLAND, N. Y.

IN the earlier history of the disease, erysipelas was supposed to be of a local inflammatory nature, but later writers have proven that its local manifestations are but a part of a general systemic infection, caused, in many instances at least, by contagion; just as we now know that diphtheria and rheumatism are not the local diseases they were formerly thought to be.

Causes.—It may be said that anything which will derange the system, in whole or in part—for example, exposure to cold, sudden checking of perspiration, errors in diet, overexertion, wounds or retention of

* Written for presentation before the Clinical Club.

circumscribed, purulent material, exposure to imperfect drainage, and a vitiated atmosphere—may, under certain circumstances, develop an erysipelatous inflammation.

In addition we have also atmospheric conditions and contagion or infection.

Epidemics of erysipelas have been frequently noted, and instances of the disease appearing in different persons successively, who have been in contact with each other, are numerous.

The French school do not admit the factor of contagion, except in a limited degree, while English writers are firm adherents of the theory.

Writers give many interesting instances of the origin of attacks of erysipelas. In one hospital it was found that patients who occupied two particular beds were always seized with erysipelas. The cleansing of a dust-bin, outside of the windows, and the closure of its door, prevented all further trouble. Two years later, a similar condition occurred, and inquiry showed that the instructions in regard to the bin had been disregarded. Strict compliance with the rule removed the trouble, as before. In another case, a defective drainage pipe, passing behind the wall, near which stood two beds, gave rise to the same conditions as mentioned in the previous instances.

The causes which give rise to erysipelas in surgical wards would seem to be of a contagious or infectious nature, and to bear out the idea of a special germ poisoning.

On several occasions the report from the House Surgeon has been, "erysipelas prevalent; wounds will not heal." A thorough disinfection of the division with chlorine, bromine, etc., has in every instance, prevented the further spread of the trouble, perhaps for months, and all the wounds would go on to rapid healing, without regard to changes of weather, conditions of drainage, or other surroundings. On the other hand, our male erysipelas wards are in the fourth story, while directly opposite, across the hall or main passage way, are patients suffering with phthisis, rheumatism, etc., and it is very rare that a case of erysipelas develops among them. The erysipelas patients are as carefully separated from them as possible, but the night-watch is always taken from the medical patients, and the day-helpers, dressers, and nurse go from erysipelas patients to medical ones, and the House Physician and his assistants do the same. The night orderly of the surgical ward (third floor) has supervision over the ward containing the erysipelas patients, but he is not allowed to go into their rooms, except in cases of emergency. In the female ward three rooms are set aside within the main ward for erysipelas patients, as far as possible from the surgical divisions. It is rare that those in attendance upon these patients are infected. Writers have stated that persons suffering with pulmonary troubles are not very susceptible to the poison, and that phthisical patients are rarely affected.

The connection between erysipelas and puerperal fever seems undeniable, so far, at least, as the source of contagion is concerned. While the question as to whether puerperal fever is an erysipelatous infection of the peritoneum may be undetermined, it is certain that physicians cannot exercise too great care while treating cases of erysipelas during an attendance in the lying-in chamber.

Diagnosis.—Many cases of mild erysipelas have been called erythema, although the latter disease, when likely to be confounded with erysipelas, appears in patches, without swelling or abrupt edges and without marked general symptoms.

It must be distinguished from scarlatina and phlegmon, but this is, as a rule, not difficult.

But in the cases of phlebitis, or inflamed lymphatics, particularly when associated with diffused swelling, and the vessels are not easily discerned, the task is a more difficult one. There is, however, apt to be less discoloration of the skin in phlebitis than in general cellular inflammation, and the history of the appearance, first of red streaks, and the presence of tender inflamed glands, will aid in determining the lymphatic infection. The two affections may, however, co-exist.

Prognosis.—Mild cases are generally self-limited, but exciting causes may give them, at any time, an unfavorable turn. In the more severe forms, many factors must be considered, namely, the age, constitution, habits of life, especially the alcoholic habit, the season of the year, atmospheric conditions, the special cause, mode of invasion, form of disease and locality affected. When the disease appears as an epidemic, the prognosis is more unfavorable in a given case, especially when of a traumatic or puerperal form. It is especially dangerous when the kidneys or liver are previously diseased. The presence of albumen should, therefore, be carefully noted. In diabetes, or when the attacks are ill-defined, recurrent, with a continuous, quickened pulse, with the probability of some organic disease being associated with it, the prognosis should be guarded.

Erysipelas of the face and head may become dangerous on account of its tendency to attack the membranes of the brain.

Phlegmonous and gangrenous erysipelas are dangerous in proportion to their extent, and to their tendency to spread without limit.

The greatest mortality occurs in surgical and the epidemic puerperal forms. In the Paris hospitals, in 1863, of 759 cases of various forms of non-traumatic erysipelas, the mortality was 17%, but in the next

XUM

year it was only 8.5%. During the same period the mortality from surgical erysipelas was 78% and 77% respectively.

Dr. Stillé, in the "International Encyclopedia of Surgery," says: "Chomel declares that he had never seen a fatal case of primary erysipelas of the face; and Trousseau had only seen three fatal cases. Indeed, he was disposed to regard this most ordinary form of the disease as benignant in its character, and even less fatal than bronchitis; and he charged that where recoveries had taken place after the use of bleeding or purging, or the employment of emetics, blisters, or cauterizations, they had occurred, not in consequence of the treatment, but in spite of it. Our own experience coincides perfectly with this, for we have never yet met a fatal case of primary, idiopathic erysipelas of the face, in hospital or private practice, where the disease was submitted to a palliative or a supporting treatment. But we have seen it fatal under the use of evacuants, sedatives, and so-called alterative measures."

In a word, "erysipelas is dangerous, more from its association with other diseases than of itself." Death generally occurs from pyæmia, pneumonia and œdema cerebri.

Sequelæ.—Dr. Paul Hartung, in writing upon the sequelæ of erysipelas,* says that infectious diseases are very liable to be followed by sequelæ, and that erysipelas is no exception to the rule.

Among the sequelæ he enumerates, briefly: "(1) Suppuration, especially in the winter season, the abscesses being most liable to form about the ankle, outer thigh, on the trochanter, and hairy scalp; again abscesses may follow which are the result of the cachectic condition of the patient and partake of the characteristics of cold abscesses.

(2) Hypertrophy.

(3) Falling of the hair.

(4) While the central nervous system is not frequently affected, although mental states, such as melancholia, with paroxysms of maniacal excitement have been noted, the peripheral nerves frequently participate in these sequelæ. The eye may be affected in every part, leading even to structural alteration. Suppuration and gangrene often attack the lids, or there may be a doughy swelling of the lids; or we may have swelling of the conjunctiva, softening and cloudiness of the cornea, ulcers with tendency to perforation—in short, all the symptoms of severe keratitis. The disease may also spread to the adipose and connective tissues of the orbit. Panophthalmitis has resulted in death through pyæmia, and complete blindness has followed atrophy of the optic nerve. Optic neuritis is not an infrequent occurrence.

(5) The gastro-intestinal tract also participates in these sequelæ. Intestinal ulcers, freshly formed, in the neighborhood of the pylorus, and round in form, have been found. These cases are oftentimes associated with profuse intestinal hemorrhage.

(6) In the circulatory system we have embolism from endocarditis with ulceration. The veins are often blocked by coagula, detached fragments from gangrenous processes.

(7) Consecutive parotitis has been noted in three cases.

(8) In the kidneys, we have acute parenchymatous swelling and infiltration of these organs, with very scanty urine, containing albumen and abundant epithelial débris. They are distinguished from similar affections in other infectious diseases, first, by their greater frequency, and, secondly, by the presence of so much blood in the urine that its sediment is composed almost wholly of red corpuscles in conjunction with blood casts.

(9) The articulations suffer from acute inflammatory affections, with rapid ensuing suppuration. Prognosis is unfavorable, softening of the capsule, granulations of the synovia, and dissolution of the cartilage generally take place, followed by complete destruction of the joint. A fatal issue can be averted only by resorting to amputation or resection, and even these are unsuccessful in about one-half the cases."

So writes Dr. Hartung, basing his statements on personal observations and deductions from published cases. We would like to know something concerning his treatment of his erysipelas cases, whether it is of the expectant method, or of the kind already quoted in condemnation by writers of his own school. Certainly no such results have followed in the cases treated in the Ward's Island Hospital.

Hospital Statistics.—Our hospital was opened for patients in Sept., 1875, and our statistics are based on the records of cases from that date until Jan. 1st, 1886. Having to use clerical assistance to overlook the records, some few points have not been brought out as clearly as we could wish.

Whole number of cases treated, -	1,018
Total number of deaths, - - - -	30
Mortality,- - - - - - - - - -	2.94%

Of this number, the head and face, in whole or in part, was affected 521 times; the upper extremities, do. 107 times; the lower extremities, do. 297 times; not definitely stated, or in limited areas, 93; 549 cases are noted as idiopathic, and 469 as traumatic.

Highest temperature, 105.5°; highest pulse, 136.

Complications: diarrhœa, 4; phthisis pulm., 5; ulcers, 5; delirium tremens, 6; alcoholism, 29; bronchitis, 14; abscess, 8; cardiac, 1; syphilis, 2; epilepsy, 1; meningitis, 1; rheumatism, 3; hernia,

* Journal of Cutaneous and Venereal Diseases. Vol. II., p. 307.

1; typhoid fever, 1; fracture of ulna, 1; asthma, 1; panophthalmitis, 1; nephritis; 1; pneumonia, 1 epithelioma of face, 1; hæmorrhoids, 1.

738 were males and 280 females.

One was five months old; 17 were between 10 and 20; 201 between twenty and thirty; 336 between 30 and 40; 255 between 40 and 50; 134 between 50 and 60; 68 between 60 and 70; 5 between 70 and 80; 1 between 80 and 90 years of age. Forty-five are reported as having had previous attacks.

Nine hundred and eighty-eight were discharged cured, either to the city, or back to other wards for treatment of other conditions.

The records of the deaths are as follows:

J. N., 42, single, Ireland, porter; admit. May 5th, '79. Died May 14th, '79. Traumatic, gangrenous erysipelas.

F. S., 42, single, Germany, clerk; Dec. 16th, '79. Died Dec. 19th. Traumatic erysipelas of the neck. (Consecutive to an abscess of the neck of two months' duration; gangrenous appearance of the cutaneous surface.)

L. M., 45, married, Germ., laborer; Aug. 12th, '80. Died Sept. 20th. Trau. erysip. of leg. Typh. fever. Œdema of the lungs. Exhaustion.

M. McG., 30, M., Ire., plasterer. Admit. Jan. 13th, '80. Died Jan. 29th. Traumatic erysipelas and alcoholism.

J. McC., 42, Ire., baker. Admit. Jan. 18th, '81. Died Jan. 24th. Idiopathic facial. Chronic fibrous pneumonitis. Cardiac failure.

C. L., 62, M., Ire, hostler. Admit. March 25th, '81 Died April 28th. Idiopathic erysipelas of the leg. (Two years before a similar attack.) Sloughing abscess and exhaustion.

H. A., 40, S., Eng., lab. Admit. May 7th, '81. Died May 9th, '81. Idiopathic of face. Cerebral meningitis. Coma.

Ann McG., 40, M., Ire., feathers. Admit. Aug. 4th, '81. Died Aug. 9th. Idiopathic erysipelas of the face and scalp. Acute cerebral meningitis.

Rebecca L., 63, M., Eng., domestic. Admit. July 26th, '81. Died Aug. 29th. Idiopathic erysipelas of leg. Relapse and general exhaustion.

L. R., M., U. S. Admit. Dec. 15th, '80. Died Jan. 19th, '81. Idiopathic of face. Improving, but on the 15th relapsed. Direct cause of death not given.

A. H., 53, Ire., tailor. Admit. Dec. 11th, '80. Died Dec. 24th, '80. Idiopathic of face. Acute cerebral meningitis.

F. F., 70, M., Ital., lab. Admit. April 19th, '82. Died May 19th. Œdematous erysipelas of the face. Alcoholism.

S. L., 40, S, Germ., lab. Admit. May 29th, '82. Died May 30th. Traumatic erysipelas of the face. Delirium tremens.

J. P., 62, M., France. Admit. Nov. 20th, '82. Died Nov. 24th. Idiopathic erysipelas of the face and neck. Alcoholism. Pneumonia. Coma. (Admit. with pneumonia and transferred to the erysipelas wards as soon as the attack appeared, Nov. 24th, with temp. 102.4°. At 5 P. M., temp. 104.4°. Died at 7.30 P.M.)

H. O'B., 32, S., Ire., driver. Admit. Jan. 2d, '83. Died Jan. 6th. Traumatic erysipelas of the face. Cerebral meningitis.

J. L., 58, S., Ire., lab. Admit. Feb. 2d, '83. Died March 4th Traumatic erysipelas of the head. Direct cause not given.

Mary B., 60, M., Ire., washerwoman. Admit. April 27, '83. Died April 30th. Phlegmonous erysipelas of the leg. Phthisis pulmonalis catarrhalis chronica. Exhaustion.

J. T., 48, M., Ire. Admit. April 2d, 83. Died April 7th. Idiopathic erysipelas of the arm. Mitral stenosis. Acute croupous pneumonia. Œdema of the lungs.

R. T, 48, S., Ire., lab. Admit. April 11th, '83. Died April 21st. Idiopathic erysipelas of the face. Phthisis pulm. catar. (with cavities).

J. McC., 21., S., U. S., sailor. Admit. April 12th, '83. Died, April 22d. Traumatic erysipelas of the face. (Injured, March 31st.) Brought in on a stretcher, with a temp. of 103°. On April 22d the temp. was 105°.5, breathing labored, cyanotic, muttering delirium.)

E. M., 24, S., Scot., tailor. Admit. April 20th, '83. Died April 21st. Traumatic, phlegmonous erysipelas of the arm. Acute alcoholic delirium. Death sudden.

Kate K., 31, M., Ire., domestic, Admit. Dec. 3d, '83. Died Dec. 9th. Traumatic erysipelas of the hand and face. Acute alcoholism. Direct cause not given.

M. McC., 65, M., Ire., lab. Admit. Aug. 21st, '83. Died August 27th. Traumatic erysipelas of the nates. Acute croupous pneumonia. Œdema of the lungs.

A. K., 27, S., Germ., pianist. Admit. August 7th, '83. Died September 30th. Idiopathic erysipelas of the leg. Acute croupous pneumonia. (On September 10th he was allowed to go to the city. He returned on the 21st, "broken up," the result of a debauch. Died in delirium.)

J. L., 21, M., U. S., hack driver. Admit. January 22d, '84. Died January 23d. Traumatic erysipelas of the leg. Acute alcoholism. Heart failure.

Mary N., 60, S., Ire., domestic. Admit. January 7th, '85. Died 25th. Idiopathic phlegmonous ery-

XUM

sipelas of the leg. Alcoholism, with general debility. Chronic bronchitis. Œdema pulmonum.

P. M., 25, S., U. S., waiter. Admit. Feb. 10th, '85. Died Feb. 13th. Traumatic erysipelas of the head (alcohol habit). Cerebral hemorrhage (from rupture of the basilar artery). Coma.

Eliza C., 55, S., Ire., domestic. Admit. January 9th, '85. Died January 16th. Traumatic phlegmonous erysipelas of the leg and thighs. Extensive sloughing. Exhaustion.

G. B., 34, S., Eng., wire worker. Admit. October 23d, '85. Died November 13th. Facial erysipelas. Acute gastritis. Collapse. (On November 11th the temp. was normal and desquamation free, but he was seized with diarrhœa and persistent hiccough, and died as noted.)

Jane Dillon, 5 mos. No dates. Idiopathic erysipelas of face, arms and legs. Acute hydrocephalus.

When we take into consideration that the vast majority of our patients are the victims of intemperance; that six were over 50 years of age; one five months old; that ten were only in the hospital four days, of which number three died within 24 hours after admission; that one was associated with typhoid fever, eleven with acute alcoholic delirium, five with chronic phthisis, two with acute pneumonia, and several with severe trauma, the mortality list presents a very different appearance, and reflects credit on the house physicians and their assistants and also on the careful attention, which has become proverbial, of Orderly McBride.

Symptoms.—The attack generally begins with a feeling of malaise, muscular and bone aching, loss of appetite, oftentimes nausea and chilliness, or is ushered in with a severe chill, followed in a few hours by a rise of temperature, which may reach 105° F., or possibly higher. The pulse corresponds with this onset, beating frequent, full and strong. The fever generally shows a remission in the morning. The ganglia may swell and become reddened, and this lymphatic infection sometimes precedes by quite an interval of time, the erysipelatous inflammation of the cutaneous surface; thus furnishing a strong clinical proof that the disease is a systemic, and not a local infection.

Locally there is a sensation of fullness or tension, with itching and burning, followed by pain, and this by discoloration. The discoloration varies from a light red or rose, to a crimson color, or even darker, the latter showing a lower type of the disease. The skin presents a tense, shining appearance, and shows a marked contrast between it and the sound tissue, with its abrupt line of elevation or ridge.

Wherever there is the greatest quantity of connective tissue, there we will have the greatest amount of swelling, so that in the facial variety, the features are oftentimes very much deformed. There is very little pitting, except in rare cases, when the swelling may have a "boggy" feeling. The face and genital organs are the parts most liable to extreme swelling.

The inflammation extends irregularly and at intervals, with an access of fever with each extension; the spreading is apt to be from the face to the scalp, and from the extremities toward the body.

In the surgical form we may have an eruption of vesicles or blebs, filled with a thin, whitish serum, or in severe cases, with a dark, bloody fluid. The skin is often covered with scales or crusts, and we may have extensive suppuration, and abscesses or boils.

As the disease-process advances, the general symptoms become more severe. The temperature is higher, the pulse quicker, the tongue is thickly coated, or dry and brown, with nausea and vomiting, and oftentimes delirium, more or less marked.

The temperature has morning remissions, which, as a rule, are slight. A rise of several degrees may occur within a few hours after the onset of the attack. The highest temperature generally occurs a day or two before the fever shows any decline. The temperature may fall to normal within twenty-four hours after the onset of defervescence. At times, an exacerbation may occur during the decline, or there may be a tendency to remit. With the decline of the fever we have a general amelioration of all the conditions.

According to the symptoms or general conditions, writers speak of different varieties of erysipelas, such as phlegmonous, œdematous, gangrenous.

The phlegmonous form is found most frequently in connection with wounds of the skin and connective tissue, and is characterized by an undermining, suppurative process, with extensive destruction of the sub-cutaneous tissues, and burrowing beneath the muscles, with the formation of large cavities. The systemic symptoms are correspondingly severe.

In the œdematous, there is less active congestion, the discoloration is lighter, and the swelling pits slightly; bloody serum is usually discharged on incision.

The gangrenous form is associated with the old and feeble, or those suffering with impaired vital nutrition. The inflammatory symptoms are consequently less marked, although the sloughing may be extensive, especially of the scrotal tissues.

Treatment.—In a prophylactic way, everything should be done to prevent unnecessary contact with the patient, while the clothing should be carefully disinfected and cleansed. The air of the room or ward should be kept as fresh as possible. Many a fever-tossed patient can be calmed much easier by a dose of fresh, cool air, than by a narcotic. During our late war, the best results were obtained when the

soldiers could be treated in tents or temporary wooden hospitals. During epidemics of erysipelas all surgical operations should be avoided as much as possible.

Externally, poultices to promote suppuration, and free incisions with counter drainage, when practicable, are necessary aids in the treatment.

Calendula, tinct. 1 to 20, to allay the burning and itching, has proven most efficient, and it is very rare that any other application is used at the hospital. Carbolic acid, 1 to 40, has been used with good effect for œdema of the lower extremities, without the presence of ulceration.

The three remedies most frequently used are bellad., apis, and rhus, while the intercurrent remedies are acon., canth., china, arsen., graph., lach., silic., sulph., hepar, nux, phos., lycop.

Aconite.—When the attack is ushered in with a chill, or chilliness, and soon followed by general feverish excitement, of sthenic form, with local congestion and tenderness; when the exciting cause is exposure to cold.

Apis.—In phlegmonous erysipelas, or when there is marked œdema. Erysipelas of the face and scalp, with typhoid tendency. Swelling on the side of the face and temples, whitish, or inclining to a delicate pink color; puffiness of the face, especially of the eyelids, with burning and stinging of the skin; sphacelated spots here and there. Suitable in many cases after bellad., or in persons suffering frequently from the disease, especially in women and children.

Arsenicum.—Very violent burning itching, worse at night, with sharp, stitching pains Vesicular forms, with tendency to gangrene. Low adynamic states.

Belladonna.—Smooth, bright red eruption, nearly shining; cerebral symptoms predominant; tongue brownish-yellow, with red edges; stitching headache and pains in the back; furious look; beating of the carotids, twitchings and convulsions; violent thirst, constipation, brown-red, strong-smelling, scanty urine; right side chiefly affected.

Cantharis.—Erysipelas (bullosum) with irritation and burning sensations; serous exudations; typhoid condition, with great restlessness, unquenchable thirst, and disgust for all kinds of drink; vomiting, with violent retching. Vesicles and blebs; watery exudation from eruption. Sometimes relieves when rhus fails.

China.—According to Dr. Jousset, of Paris, the best medicine in grave erysipelas. Erysipelas of the face, hands and genital organs. The attacks are oftentimes accompanied with intense fever, and with symptoms very severe in character.

Graphites.—Tendency to repeated attacks of erysipelas (bullosum), spreading from the nape of the neck to the face, perspiration does not relieve; phlegmonous erysipelas of the head and face, with burning, tingling pain; glutinous exudation, with congestion to the head and roaring in the ears; swelling and induration of the lymphatics and glands. Erysipelas alternating with herpetic symptoms. Erysipelas of the face, with chills and fever, occipital headache, with sensation of constriction, with burning, stinging and itching. (Where there was blistering of a yellowish hue, euphorbium.)

Lachesis.—When the swelling assumes a purple, bluish-red or leaden hue, with tendency to delirium, as soon as the eyes are shut; bloated red face, attended with heat, headache and coldness of the extremities; one-sided, tense headache, extending from the occiput to the eyes, with vomiting, vertigo, tendency to faint, and numbness. In the gangrenous form, or in grave and malignant cases, with profound adynamia, collapse, comatose state or constant chilliness, tongue dry, glossy, tremulousness. General aggravation from pressure, and from noon to midnight.

Rhus tox.—Vesicular erysipelas, whether on the scalp, face or elsewhere, with swelling and much shining redness; great restlessness; tendency to spread on the surface, rather than to penetrate deeply into the tissues; rheumatoid pains all over; acute, painful, burning eruptions, especially at night, with marked tumefaction and œdema.

Silicea.—When there is excessive suppuration, with hectic fever, caused by deep-seated phlegmonous erysipelas. In secondary conditions, where the bone substance is involved.

Sulphur.—To prevent recurrence or eradicate the tendency to repeated attacks of erysipelas.

Benign and common.—Apis, bell., graph., hepar.

Phlyctenular and vesicular.—Apis, bell., canth., graph., hepar, lach, rhus.

Malignant.—Arsen., china, lach.

Phlegmonous.—Merc.

Gangrenous.—Arsen., carbo veg., lach.

Critical age (or recurrence).—Graph., lach., sulph.

THERAPEUTIC NOTES.

Coptis teeta, a plant native of China, has been found to slow the pulsations of the heart similarly to digitalis, so that we have another addition to our cardiac sedatives.

Capparis Corriacea, a native of Peru, in the shape of an infusion, three drams of the powdered fruit infused in red wine being the dose, has been found useful in epileptic, hysterical and other similar disorders.

Salix nigra in fluid extract is much lauded as a sexual sedative, being used in ovarian irritation and in

some cases of dysmenorrhœa where there is sexual excitement.

Urtica urens, a decoction made from the common stinging nettle, is strongly recommended by Rothe as a local hæmostatic.

Parthenine from the Cuban plant known as parthenium hysterophorus comes forward as a new antiperiodic. It appears to have great power to reduce temperature in fever, in the maximum dose of thirty grains.

Peroxide of Hydrogen is reported to have produced excellent results in the treatment of diphtheria. It may be administered with glycerine.

Capsicum annuum will be found of great service in alcoholismus where there is great restlessness, burning in the stomach and coldness between the shoulders.

Phormium tenax, a botanical product of New Zealand, bids fair to prove a valuable auxiliary to the surgeon, in producing healthy granulations in wounds.

Chromic acid, ℥i to aqua ℥i applied locally at intervals of a week, is said to be an excellent remedy in endocervicitis.

Myrtle, an ounce of the leaves of the common variety, boiled in a litre of water, is said to be an excellent injection in the treatment of leucorrhœal discharges.

Antipyrine still holds its place as an antipyretic, and it has been successfully used in scarlatina in five grain doses every hour in children. Good results are said to follow its alternation with digitalis. Sweet spirits of nitre is incompatible to antipyrine, the combination forming a blue aniline.

Adonis vernalis is claimed to be superior to digitalis and to convallaria in many cases of cardiac disease. It is said to be powerfully diuretic and not cumulative in its action. It is used largely in chronic heart diseases.

Electricity is said to be a most reliable agent in increasing the secretion of milk. Both currents have been employed. The current is allowed to pass through the breasts for fifteen minutes twice a day.

Kali chloricum is recommended by Dr. Richard Hughes in simple stomatitis.

Stigmata maidis is extolled by Dr. Burt in angina pectoris when the pain is increased by ascending steps.

Iodol is highly spoken of in syphilitic and other ulcerations where there is no gangrenous tendency. Buboes are injected with a solution of one part iodol to sixteen of alcohol and thirty-four of glycerine.

Aluminium acetico-tartaricum is claimed as a new specific in ozæna. The dose is one teaspoonful of a fifty per cent. solution in one-half to a pint of water, we presume applied locally.

Pichi (*fabiana imbricata*), native of Chili, is said to have a wonderful effect upon the formation and discharge of renal and vesical calculi. The profession will be glad to add to their armamentarium in this tedious affection.

Ichthyol in thirty per cent. solution is said to relieve the severe itching of senile prurigo and a ten per cent. solution relieves pruritus. Four tablespoonfuls a day of a one per cent. solution internally, has relieved the worst cases of gastritis.

Scott's Emulsion of cod liver oil with hypophosphites, although well and favorably know to the profession for a long time, deserves to have renewed attention called to it as a nutrient at this trying season. It is not only pleasant and palatable, but its valuable combination of iodine, bromine and phosphorus is in accordance with perfect chemical union. Where indicated it meets an important demand.

Trypsin, (Fairchilds',) is now offered as a solvent for diphtheritic membrane.

The well-known properties of this principle of the pancreatic juice give the strongest grounds for anticipating success in its application for this important purpose.

Trypsin acts quickly and powerfully upon fibrin and fibrinous membrane. It is not dependent upon the interaction of acid as is the case with pepsin. It is most active in a slightly alkaline media.

It may be applied by spray or brush. In practical use the results have been very encouraging.

Messrs. Fairchild Bros. & Foster announce that, owing to the great cost of this product and their inability to more than keep pace with the actual demand, they cannot offer samples.

It may be obtained of the principal drug houses in this country, and is dispensed in ½, ¼, and 1 oz., bottles with full directions.

A SPECIFIC FOR BURNS.—Dr. Moxley (*Eclectic Med. Journal*) condemns the application of soda bicarb. to burns, and is inclined to think that the only good that has ever resulted from its use has been obtained by smearing it thickly over the affected part, thereby excluding the air and only acting as a mere covering. He then goes on to say: "But if you will apply balsam copaiba freely over the next burn you have to treat, you will have a more correct idea of the meaning of the word specific than by any other means I know of. The squalling child will quiet down in a few minutes. You will return home paid, and the mother will bless the 'bully doctor.' The same balsam is equally specific to the cure of frozen parts, removing the pain and soreness in a few applications."

IODINE TINCTURE IN THE TREATMENT OF INTERMITTENT FEVER.—Schabliowsky (*Russkja Medicina; Deut. Med. Zeitung*) has treated twenty-six cases of intermittent fever with tincture of iodine, ten drops being given three times a day. A cure resulted in every instance, without unpleasant consequences.

The New York Medical Times.

A MONTHLY JOURNAL

OF

MEDICINE, SURGERY, AND COLLATERAL SCIENCES.

EDITORS:

EGBERT GUERNSEY, M.D. ALFRED K. HILLS, M.D.

Business Communications should be addressed, "**Publishers, 526 Fifth Ave.,**" and Checks, etc., made payable to THE NEW YORK MEDICAL TIMES.

Published on the First of each month.

OFFICE, 526 FIFTH AVENUE, NEW YORK.

NEW YORK, MARCH, 1886.

"*A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and* OUGHT *to be the* ONLY ACKNOWLEDGED RIGHT *of an individual to the exercise and honors of his profession.*"—Code of Medical Ethics, Amer. Med. Ass., Art. IV., Sec. 1.

Our practice is *not* "based on an exclusive dogma, to the *rejection* of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology and organic chemistry."

METHODS OF DIAGNOSIS.

POPULAR prejudice sides strongly in favor of the wisdom of the physician who is the most minute, protracted, and laborious in his investigation of disease, and who brings to his aid the largest number of instruments to fully establish his diagnosis. No matter what the trouble is, as a general thing if a physician wishes to retain the confidence of his patient he must go through a certain round of questions, and pursue a certain line of investigation. The tongue must be inspected and the pulse counted by the watch, the different organs must be punched and pounded, and every inch of the body carefully looked over, and when all is finished and the patient duly impressed with the wisdom of his medical adviser, the medical adviser himself must have a feeling of humiliation for the necessity of such an exhibition.

Dr. Lawson Tait, in an admirable paper read before the Medical Society of the State of New York, in a few master strokes of his pen sketches some of the methods of medical diagnosis. He says:—

"Let me give a few examples, such as I have been able to establish in my own belief after much search, as to how a skilled workman may do with his fingers what the inexperienced may require special tools to enable him to accomplish. In the gynecology of twenty years ago, which was pretty much the period at which the great master of the art left it, there still remained a survival of the battles which waged for many years concerning the use of the speculum and the sound. The school of French gynecology was charged with an altogether improper, and indeed, as it was urged, a very indecent frequency in the use of the speculum. On the other hand, the English school, with Simpson at its head, was fully as often and as loudly charged with an improper use of the sound. The conclusion that I have come to concerning both of these instruments and both of these disputes is, that both sides were right and both were wrong.

"It is perfectly impossible for any novice in the diseases of women to obtain an accurate notion as to the condition of the vaginal mucous surface of the os and cervix, and to some extent the interior of the uterine canal, without the constant, I would almost say the invariable, use of the speculum. It is also quite as impossible for that novice to form any notion as to the position of the fundus, or the relations of the uterus with the pelvic tumor, without the employment of the sound. But no practitioner of gynecology can possibly be regarded, at least by me, as an accomplished specialist who uses either one or the other of these instruments with great frequency. I have found in my own practice, that just as my experience increased so did both of them become unnecessary, until, concerning the speculum, it is a fact that, unless I want to do some operation, or make some special investigation within or beyond the vaginal cavity, the speculum is never employed at all; and for the discovery of the position of the uterus and its relations, the sound has almost ceased to be an advantage.

"It is perfectly impossible for me to convey by any kind of description how I can tell, by the touch, an inflamed vaginal mucous surface from one that is healthy; neither can I describe the feeling that the everted surface of the cervix gives to me which declares the condition of chronic endometritis. But I know that my educated finger-tips can make this distinction. If, on the other hand, I discover a pelvic tumor, long practice enables me to tell with almost perfect certainty, and without the use of the sound, that it is a retroverted fundus, or adherent tube or ovary, or by its fading away toward the broad ligament, on one aspect of the uterus or another, that it is an intraperitoneal hæmatocele; while the peculiar resistance of a myoma conveys to my mind an accurate impression which needs no probing of the uterus to substantiate. So a cyst reveals itself in a way I cannot communicate. As a result of all this I very rarely use the sound.

"As a matter of fact, I have found that these two instruments, the speculum and the sound, as methods

of diagnosis, have been productive of uniformly more harm than good. That a blennorrhagic discharge from the vagina of any patient requires the introduction of a speculum is one, I am fully persuaded, of the stock beliefs of the great bulk of general practitioners. But it is certain that nothing of the kind is requisite, and a very large amount of mischief, there can be no doubt, has been produced by this belief. It is not at all an unusual thing for me, on taking part in a consultation with the family physician concerning some such case, to be told by him that he very much regretted that he had not made an examination by the speculum. Others have told me that they made the said examination, and when asked what they saw, or what they did, the answers usually given are that they did nothing, they merely made the examination; that is to say, they passed the instrument, and with that proceeding were perfectly satisfied—evidently under the belief that the passage of the speculum was quite as much a curative agent as a method of diagnosis. Similarly with the sound. I have heard many practitioners tell me of their experience with the sound, or rather their want of it, and I judged that they looked upon it as a sort of magical charm, the introduction of which into the uterus was to achieve unmeasured good. As a matter of fact, the sound is one of the most dangerous instruments ever invented for the treatment of human suffering, and in my own practice obtains hardly any kind of employment at all.

"If I may, in conclusion, take one more illustration to show how completely the results of daily practice, or what may be called rule of thumb, may triumph over the mere teaching of the schools, I would mention the much-discussed bimanual method of examination. I read recently a long rigmarole of nonsense by a German, who evolved from his superabundant inner consciousness, but not from clinical experience, the conclusion that no man could properly examine the pelvis in this way unless he had the patient on her back, turned in the lithotomy position, he being placed opposite the perineum. In the first place, English women would not submit to such brutality, and it is wholly unnecessary. The most complete and satisfactory examination of any woman's pelvis can be made while the patient lies quietly on her left side in bed, without the exposure of one square inch of her skin. Any man who requires more than this is either a pupil or a dullard.

"So it is with such a special instrument as Sims' speculum. I have heard some of my American friends say that it is impossible to do any operation upon the vagina satisfactorily without it. All I can say is that I have now cured some three hundred cases of vesico-vaginal and recto-vaginal fistulæ, never having failed in any case, nor having ever refused one, and I habitually pass the sutures with my finger-tips, wholly unaided by speculum of any kind."

Of course not every one even with long practice can be as expert in diagnosis as Mr. Tait, for it requires not only an education of the eye, the ear, and the fingers, but a peculiar discipline and quickness of the mind to diagnose skillfully, quickly, and with the least possible exposure, but these are certainly qualities that should be cultivated by every one. Minute examinations with instruments are of course often necessary, but not unfrequently there is unnecessary exposure and fatigue to the patient simply because the eye and the fingers have required no skill by practice or from force of habit, or what is still worse, a desire to impress the patient and his friends with what they are pleased to call the thoroughness of the examination. The trained mind detects in certain forms of headache indications that the cause may be with the eyes, and a careful examination finds the remedy not in drugs but in properly adjusted glasses. To subject every patient to such an examination would show a great lack of observation on the part of the physician. The general expression of the countenance and a few well directed questions reveals the almost certainty of diabetes, which is confirmed by an examination of the urine, and yet these very indications are often unnoticed or disregarded, as was the case of Gen. Hancock, until too late. What we insist upon is that every physician should make his examination as thorough and complete as possible with the very smallest amount of exposure and fatigue necessary to accomplish his purpose.

THE DEATH RATE IN THE MEDICAL PROFESSION.

IT is a matter of wonder that a profession whose daily work leads them among all classes of contagious diseases so seldom, in the belief of the public, fall victims to diseases so fatal to others. And yet statistics show that the chances for long life are greater in almost every other calling than in that of the physician. A paper recently read before the Royal Medical and Surgical Society of London by Dr. William Ogle, Superintendent of Statistics in the Register General's office, gives some startling facts upon this question. He shows from the records of his office that the death rate among medical men, has been steadily increasing

during the past three decades in England and Wales. In 1860-1-2 it was 23.63 per thousand; in 1871 it was 24.99 and in 1880-1-2 it had steadily increased to 25.53. Among lawyers from 1880-2 it was 20.23, while among clergymen it was only 15.93. Of what is called the three learned professions, the death rate among physicians is not only far in excess of the others, but steadily on the increase. It is interesting to know the comparative fatality in our profession with that of other employments in the class of disease resulting from exposure, mental and physical wear and tear and necessary irregularities in living. Comparing the death rate among physicians with the general population, we find in typhus it is as 79 to 38; in diphtheria, as 59 to 14; in typhoid fever, as 311 to 238; in malarial fever, as 46 to 11; in erysipelas, as 172 to 136; in gout, 291 to 78; in rheumatic affections, 251 to 215; in diseases of the nervous system, 4,565 to 4,268; diseases of the circulatory system, 4,142 to 2,934; in diseases of the liver, 1,741 to 744; from other diseases of the digestive organ, as 976 to 632; in diabetes, 284 to 108; in calculus, 86 to 30; diseases of the bladder and prostate, 634 to 287; diseases of the urinary system, 1,520 to 665. The total mortality from all causes being as 25,535 to 22,829. It is a comfort to learn from these statistics, that deaths from alcoholism and suicide are but little in excess in our profession to those from the same causes in the general public. The immense drain upon nerve force and vitality might lead to an immoderate use of alcoholic stimulants and narcotics, while the excessive fatigue of one of the most laborious and thankless professions in the world and the full knowledge of the intense sufferings which must attend certain forms of disease might tempt the weary and disappointed to seek by their own hand that rest which comes only with death. The fact that the proportion of deaths is no larger from these two causes in a profession who live in an atmosphere of suffering and death where they are two often, alas! powerless to help, speaks well for the endurance and strength of character of its members. Present statistics show a marked decrease in the annual number of graduates and matriculates in the American colleges which is particularly apparent in the larger cities. The decrease in the number of students is probably owing partly to the fact that all the colleges require a more extended range of studies than formerly and are more rigid in their examinations, and partly to the chances of greater pecuniary success with less wear and tear of body and mind in other employments.

THE HYDROPHOBIA PROBLEM.

THE much-discussed hydrophobia problem still occupies much attention from the lay press, and M. Pasteur has been rather injured by it because of misrepresentation. From what we learn of Pasteur's methods and procedures they are not at all quackish. A Paris letter states that a young man who had been bitten by a dog wrote to Pasteur and received the following reply:—"It is useless for you to come. Every mad dog, whether it eats or not, dies from rabies in a few days; if it eats, death takes place a little more slowly, but it never exceeds eight or ten days. In the interval it manifests rabic symptoms. Confine the dog to his kennel, where he must be fed with precaution for at least twelve days. This had better be done under the supervision of a veterinary surgeon. If the dog lives after the time indicated, you may be assured that it is not mad. Meanwhile you have nothing else to care about than the wound caused by the bite. This should not be neglected. The saliva of a dog, even that of a healthy one, contains microbes foreign to the rabic virus, and those microbes might produce abscesses, and, in certain exceptional cases, septicæmia. In case the dog should go mad, come to me without delay, and I will apply the preservative treatment for rabies." This is a perfectly professional course. Pasteur has treated many patients who really seemed in actual danger from infection, but the subject is yet in its infancy, and opinions respecting it should be reserved until more conclusive experiments can be made.

Pasteur certainly deserves great credit for his perseverance in experimenting for several years on many thousand rabbits, whether his method proves useful or not.

There is no authentic case on record of persons being bitten by mad dogs and having hydrophobia years afterward. The medical profession may not cure, but they can prevent much. There are many opinions on the methods of prevention. The pathology of the disease is not known, and the profession is not agreed upon the cause. Some hold that it may be communicated by other fluids than the

XUM

saliva. Statistics show that out of 534 reported cases, 353 showed symptoms before three months, and only twenty after six months. One case is reported to have appeared after 108 days. The longer a patient goes after being bitten the safer he is from having the disease. After six months the patient is comparatively safe, and after one year there is no danger of the disease ever appearing. There is no authentic case of its having manifested itself after this time.

The profession should use every effort to quiet the fears of ignorant people in respect to the subject, and above all do not allow an animal to be killed within *two weeks* after biting a person.

STATE BOARD OF EXAMINERS.

THERE is a Bill before the Virginia legislature for a "Homœopathic State Board of Examiners" and as there are only fifteen homœopathic practitioners in the State, according to the *Va. Medical Monthly*, it is proposed that the homœopaths appoint a committee to examine in materia medica and therapeutics, such candidates as signify an intention to practice homœopathically. This plan is all right, providing no injustice is done candidates from prejudice. The examination should be conducted by examiners ignorant of this intention, and the election as to materia medica, etc., might be deferred until after all other branches are finished. If the intention is to deal honestly and justly, there will be no difficulty, and the plan proposed will be the simplest. It would be much better if the State Board of Medical Examiners would introduce a series of questions with their own, which would be satisfactory to the homœopathists as well as to themselves, covering the action of drugs, which should be answered by all candidates. All practitioners will admit that a knowledge of the physiological action of drugs is absolutely necessary to the intelligent practice of medicine.

With a reasonable knowledge of the physiological action of drugs, one may practice homœopathically or allopathically, as occasion may require, and the question as to the intention had better never come up.

Let the "regular school" as it is sometimes called, show the right disposition, and it would soon absorb all that is worth absorbing from the others.

On the other hand, let the questionable and doubtful term "homœopathic" disappear as it is fast doing, and with it will go much of the bigotry and intolerance which its existence has engendered.

There are a large number of drugs which are common to the materia medica of all schools, and it could not be otherwise than reasonable to have the questions confined to these.

In practice of medicine, the answers would necessarily cover a wide range and if the "red flag" *homœopathic* were taken in, there would be no prejudice and hence no injustice.

If the dominant body of physicians who can afford it, would only seize the opportunity with suitable overtures, *dishonorable to none*, and deal with it in the light of the Golden Rule, the sects in medicine would soon be of the past.

BIBLIOGRAPHICAL.

PUERPERAL CONVALESCENCE AND THE DISEASES OF THE PUERPERAL PERIOD. By Joseph Kucher, M.D. New York: J. H. Vail & Co. 1886. pp. 312. 12mo.

In this volume the author has attempted to give in concise form, the generally accepted views of the origin and treatment of puerperal diseases especially as practiced in Vienna.

The book is intended for practitioners and will prove a great help to those who practice in the lying-in-room. We have no hesitation in commending this work to those of our readers who are interested in the subject of which it treats.

PRACTICAL NOTES ON THE TREATMENT OF SKIN DISEASES. 1. Diseases of the Perspiratory and Sebaceous Glands, including Hyperidrosis, Bromidrosis, Prickly Heat, Seborrhœa, Comedo, Acne, Acne Rosacea, Sycosis, and other disorders of the Cutaneous Glandular System. By George H. Rohé, M.D., Professor of Hygiene and Clinical Dermatology in the College of Physicians and Surgeons, Baltimore, Author of "A Text-Book of Hygiene," etc. Baltimore, Md.: Thomas & Evans, 1885. 16mo. pp. 62.

The author has given in this little book, brief and exact descriptions of the various diseases considered, and indicates the simplest and most direct methods of treatment, directed especially for practical use. It may be followed by similar contributions concerning other diseases.

Transactions of the Medical Society of the State of Pennsylvania, at its thirty-sixth annual session, held at Scranton, Pa. May 27-29, 1885. pp. 516.

Transactions of the Homœopathic Medical Society of the State of Pennsylvania. Twenty-first annual session, 1885, pp. 282.

Transactions of the Homœopathic Medical Society of the State of New York. 1885, vol. xx. pp. 296.

In these volumes we have eleven hundred pages of closely printed matter, some of which deserves a wider reading than it can possibly get in the restricted distribution which all such publications have. The papers which are worth printing would be of more service to all concerned were they published in the journals.

LOCAL ANÆSTHESIA IN GENERAL MEDICINE AND SURGERY, *Being the Practical Application of the Author's Recent Discoveries.* By J. Leonard Corning, M.D., formerly resident assistant physician to the Hudson River State Hospital for the Insane, etc., etc. New York: D. Appleton & Co. 1886. pp. 103. 8vo.

In this volume the author gives his plan for the prolongation of the anæsthetic effects of cocaine hydrochlorate, hypodermically administered, with minute directions concerning the practical execution of the method and the incarceration of the anæsthetic by means of rings and hæmostatic clamps. The subject will prove interesting to all who have occasion to use an anæsthetic, and shows the wonderful progress that is being made in this direction.

DOGS IN HEALTH AND DISEASE, AS TYPIFIED BY THE GREYHOUND. By John Sutcliffe Hurndall, member of the Royal College of Veterinary Surgeons. London: E. Gould & Son. 1886. pp. 82. 16mo.

This little brochure will enable the owners of dogs in many instances to treat their pets without professional assistance. The remedies advised are mainly in small doses.

PERIODIC DRUG DISORDERS. Part I. General and Febrile Drug Disorders. By L. Salzer, M.D., Calcutta, India. pp. 88.

An arrangement of symptoms according to periodicity, which will be found of service to symptomatologists.

A CYCLOPÆDIA OF DRUG PATHOGENESY. Issued under the auspices of the British Homœopathic Society and the American Institute of Homœopathy. Edited by Richard Hughes, M.D., and J. P. Dake, M.D. Part II. Agaricus—Arnica. pp. 192.

Our readers will find in the June, 1885, number of the journal page 90, a statement of the schema under which this work is being compiled, and the present fasciculus follows the same general plan as the first. While we are pleased to note the issue of this second number of the work, we must admit our surprise at the enterprise which has made it possible. It was not to be expected that this would prove a popular work on materia medica, because it requires study to make its contents of use. It is not the A B C of the subject, and will not fill the place in the primary, any more than a work on grammar can be substituted for the alphabet. This is par excellence the work for the advanced pupil, no matter what his theories as to the action of drugs. Now let us have a condensation that shall be worthy the subject.

TEXT-BOOK OF OPHTHALMOSCOPY. By Edward G. Loring, M.D. Part I. The Normal Eye, Determination of Refraction Diseases of the Media, Physiological Optics, and Theory of the Ophthalmoscope. New York: D. Appleton & Company, 1886. pp. 274, large octavo.

This is one of the most practical and readable books ever issued upon the subject of which it treats. By its aid, the student with practice in the use of the instrument, can become expert in its use, every little detail being so concisely and clearly stated. The author must have the credit of much originality, and his book should be in the hands of every person who uses the Ophthalmoscope. The work is profusely illustrated with excellently well executed plates. The frontispiece is an excellent lithograph of a case of sclerotico-choroiditis posterior. The physical part of the work is all that could be desired.

The *Century Magazine* for February contains a remarkable variety of subjects of public moment. Forty-five American authors with James Russell Lowell at the head publish brief pleas in favor of international copyright.

THE SECOND EDITION OF THE DISEASES AND TREATMENT OF THE EAR, by Oren D. Pomeroy, M.D., of the Manhattan Eye and Ear Hospital and of the N. Y. Infant Asylum, published by D. Appleton & Co., N. Y., has been carefully revised with such addition of new matter as the constantly increasing knowledge upon the specialty warrants. The result is one of the best and most practical treatises upon the subject with which we are acquainted.

CORRESPONDENCE.

A TREATISE ON THE BREAST AND ITS SURGICAL DISEASES.*

The second edition of Dr. Ostrom's mammary monograph is a handsome volume, a credit alike to the author and the school of medicine whose adherent he is, for scientifically it is abreast of the literature of the day at least, if not (as we think it) actually aggressively advanced.

The book is comprehended in four parts—the first, discussing glands in general; the second, the mammary gland, particularly its comparative anatomy; the third, the anatomy, evolution, involution and secretion of the human mammæ; and the last (the greater bulk of the volume) mammary ætiology and neoplasms.

The preliminary discussion (of glands generally) may seem on mention superfluous. But it will be found essential to the author's purpose; for in it he takes up the embryonic theory of blastodermic differentiation, describing the two primitive layers in the ovum, the epiblast, and the hypoblast, and that later layer between the two, the mesoblast. The histological physiology and anatomy of glands are then most carefully and intelligently described, dipping deeply into cellular embryology.

That all this is essential to the author's purpose, and logical that he may establish his deductions from his premises, is at once seen when we read in the preface: "The principal changes made relate to the ætiology of neoplasms and are based upon the permanence of blastodermic differentiation, and upon the broad hypothesis, that all morbid processes have their genesis in normal processes; that pathological new formations obey in their construction the same laws that pertain to the physiological building up of tissues."

The part (of twelve pages) on the comparative anatomy of the mammary gland is excessively entertaining and instructive reading. As a part of a purely medical and surgical work it is unique, and some might object to it as superfluous. The excellence of the discussion goes far to excuse it however, and its bearing upon the whole work leads us to think that the entity of a remarkable complete treatise would have suffered by its omission. This discussion develops two curious ideas: First, in accordance with the comparative evolution of mammæ and nipples in various mammalians, the number of these former should theoretically foreshadow the number of offspring at a birth. By which reasoning it follows that twin births are normal to the human female, and single births are an abnormal degeneration—a very suggestive idea when we reflect upon the floods of milk which every physician has seen wasted from the mammæ of healthy vigorous women nursing

*(By H. I. Ostrom, M.D. Second edition, New York. A. L. Chatterton & Co., pp. 377.)

but a single child (see also pages 108 and 109). Another quaint thought in connection with the rudimentary male breast is stated by the author as pointing "to a pre-historic time when vertebrates first suckled their young and both parents shared in the responsibility of providing support for their offspring."

Part third contains in four chapters a complete though terse description and discussion of (*a*) the human mammary gland, (*b*) its evolution; (*c*) its involution; (*d*) its secretion. A hasty reader who thinks to skip or slight these preliminary chapters, and pass on to more practical matters will find himself compelled to turn back and read carefully the section on glands in general, and those on the evo- and involutions of the human mamma—unless, indeed, he be as widely read in the latest theories of cellular pathology as the author. For upon the premises laid down in these primary discussions rest the characteristic ætiology of neoplasms later enunciated.

Speaking of milk, Dr. Ostrom alludes to Prout's theory of its all-sufficiency as an article of diet, which he regards as not well grounded. We could have wished that environment had been mentioned in this connection. For so soon as the infantile condition passes and the baby begins to walk and talk, and exercise and live more like his elders, *i.e.*, when he becomes twelve or sixteen months old, the sooner he be weaned from milk *as an exclusive diet*, the more robust he becomes. *Per contra*, Dr. Wier Mitchell has practically demonstrated that given the adult in infantile environment, so to speak—that is, flat upon his back in bed, not allowed to move hand or foot for any purpose, and frequently milk is the best and only pabulum.

The author's theory which attributes "the continuance of lactation to the sympathy which exists between the maternal organism and that of her offspring" is as far as we know unique. But may not the grosser element of the continued nerve stimulus applied to the nipple by the suckling of the child largely explain that continuance?

Part four contains an exhaustive discussion of the ætiology of the mammary gland in an unnumbered chapter, while seven following chapters are devoted to practical matters thus: 1, Anomalies of development, *i.e.*, supernumerary glands and nipples; 2, Diseases arising from animal parasites, 3, Diseases associated with functional activity of the gland and genitals, including inflammation, and ulcers of the nipple and gland, fissure of the nipple, lactiferous fistulæ, and galactocele; 4, Diseases of abnormal growth, including four forms of hypertrophy in one class, mesoblastic tumors, (*i.e.*, fibromata, irritable tumors, gumma, lipomata, sarcoma, myxoma, chondroma and osteoma) in another, and epiblastic tumors (adenoma carcinomata and cysts) in another; 5, Diseases of the male breast; 6, Amputation with the knife, scissors, or elastic ligature, and escharotics, and 7, Therapeutics, including a repertory.

"The ætiology of the mammary gland" will repay a careful and candid perusal, since by it the author seeks to enforce the German classification of tumors (to which we have alluded). That is, neoplasms from connective tissue, mesoblastic; neoplasms from epithelial tissue, epiblastic.

Many passages afford suggestive reading. For instance, "It is probable that the laws of heredity in disease are not far removed from those of health, or from those which determine the inheritance of physical defects. The latter are truly diseased conditions, for they are neither in conformity with the general type, nor conducive to the greatest usefulness, and still, aside from the local formative deviation, there may be nothing that can properly be called disease. In this connection, it is submitted that the ovum and sperm cells contain the essence of the organisms from which they proceed, and in this sense are secretions of the entire system, not of the ovaries and testicles only, and that any condition which has become so entirely a part of the life of the individual as to receive a form agreeable to that condition, be this of one cell, or of an entire organ or member, will be represented in the germinal elements of that individual, and unless counteracted, will be reproduced in the offspring of that individual.

Deviations from the typical form of the body are first moulded in the germinal layers of the embryo, either as an excess or a deficiency of developmental cellular elements, for to these two forms may all deformities be referred."

On page 95 the author alludes to "Virchow's teaching of the local origin of dyscrasias" and intimates that cell malnutrition may be considered as the initial process and point in pathological new formations and then inquires "but whence the malnutrition?" It seems to us that Hahnemann answers that when he assigns the origin of all disease to a disturbed equilibrium of vital force, which force may reasonably be assumed to be the essence of the life of the cell. If these premises are admitted we have modern pathology squarely in the position of endorsing the principle of the action of small doses of drugs as enunciated by Hahnemann; in a word, it testifies to the scientific truth of homœopathy.

The causes of anomalies of development receive careful attention, and constitute a fascinating discussion.

It would seem to be suggested that both the germ and sperm elements contain within themselves representation from every part and tissue of the bodies of the female and male respectively, even to the representation of individual peculiarity or deformity deviating from the type of the race. If these elements, (the germ and sperm) mutually and wholly saturate each other the offspring will closely resemble the parents. If some elements of the germ are *not* fertilized by the sperm, a deformity characterized by deficiency results; if a hyper-fecundation and development take place in the parent cells of certain parts, a deformity results in those parts characterized by superfluity. In this connection, on pages 108 and 109, will be found additional reference to the possible normality of twin births to which we have already alluded.

The discussion of tape worms has been objected to, by one reviewer of this monograph as out of place. Probably this objector will admit that hydatid tumors cannot be perfectly understood by any person not familiar with the genesis of entozoa, and upon page 129 we find "Hydatid of the breast is a very rare disease, and though its existence has been doubted, several attested instances of the occurrence of the larvæ of the tænea echinococcus in the gland place the question beyond doubt." When one gets a rare instance of disease, where shall he look for information if not in a treatise devoted as a monograph to the organ effected, or to the type of disease encountered, and nowhere have we seen hydatids more clearly treated.

The chapter upon inflammation of the nipple and breast is well worth careful consideration. The author's classification of mammary inflammation into (*a*), subcutaneous; (*b*), submammary; (*c*), parenchymatous, and (*d*) lymphatic, and his careful description of each variety is not commonly found, but it is both scientific and practical, and we think will serve to solve many problems seen in the course of cases generally styled mastitis.

The recommendation to prescribe and carefully distinguish between the effects of both hot and cold water is worthy of consideration. In the same manner the uses and abuses of the poultice are pointed out.

On the other hand, we are not sure that the application of sublimate dressing to a nipple abscess, as advised by the author is either necessary or advisable.

Under mazoitis (parenchymatous inflammation) the author seeks to emphasize the dangers arising from repeated attacks of swelling and pain in the breasts at the menstrual nisus, and we cannot but think it a warning worth heeding.

For some years we have been insisting upon the weaning of children as soon after their twelfth moon as possiole, as being best for both mother and babe. We find an additional reason in the following well-grounded opinion: "If lactation continues beyond what may be considered as a reasonable period this long-lasting physiological action may induce the chronic inflammation which precedes a cold abscess," pages 152-53.

To the method of classifying tumors we have alluded; their discussion will be found to be very complete and lucid, the peculiar and general degenerations (or diseases as the author styles them) of each class of tumors being differentiated. The discussion of carcinoma seems to us especially satisfactory, the description beginning on page 264 being very happy. The remarks upon heredity as related to carcinoma, are particularly of value. We are tempted to make many quotations but want of space forbids. On page 266, however, we find a trenchant remark which should be flung as a hard fact in the face of every woman who don't want her baby or to suckle it. "If pregnancy and lactation follow an abnormal course (and there can be no doubt, that the requirements of modern life predispose to departures from healthy reproduction) there exist conditions that favor the development of mammary neoplasms."

The combined method of medical treatment is advocated and its rationale explained. It consists simply in injecting into the tumor the indicated drug which is given by the mouth. With the drug is combined glycerine and $\frac{1}{1000}$ part of the bichloride of mercury. The full formula is given. By this method the progress of the disease is arrested in many cases, although no cure is claimed.

Dr. Ostrom alludes to Dr. Declat's method as having "been disappointing." It has simply proved uncertainly pall'ative.

The surgical measures, the question of operation and the operation as performed with knife or scissors, are very fully and clearly set forth. We only marvel that the author is so patient as to describe with some detail the use of the elastic ligature and escharotics.

The remarks upon anæsthetics should be read by all who use them; not because they are new or extensive but as emphasizing important points. Drug mention is scattered through the volume and a full list is appended in special therapeutics and a repertory, wherein will be found very exact indications and a number of drugs not very generally in use.

A bibliography of some two hundred authorities in four languages should convince even the skeptical, that the author has not rushed hastily to a consideration "of evils which he knew not of." Yet the author's style will gain by greater simplicity, shorter sentences, and the couching of thoughts (as far as possible) in language destitute of technicalities. The use of a parenthesis would at times we think help the eye to grasp the meaning

The press-work, type, paper, binding, etc., are among the best seen from Mr. Chatterton and are very satisfactory. An individualized page title over each page instead of the reiteration of a chapter title would have greatly facilitated reference.

On the whole we cannot but regard this monograph as among the most important recent additions to medical literature, and no physician can feel he is a *mammalian*, up to date, unless he has read it.

C. M. C.

ŒNANTHE CROCATA IN EPILEPTOID CONVULSIONS.

In the MEDICAL TIMES of November, 1884, I narrated a case of epileptoid convulsions treated successfully by *œnanthe crocata*, or water-hemlock. The attention of our professional brethren of the Eclectic School seems lately to have been called to this remedy, and in the December, 1885, and the February, 1886, numbers of the *Eclectic Medical Journal*, (Cincinnati), are papers thereon by Drs. E. R. Waterhouse and H. L. Henderson strongly corroborative of its value in epilepsy. The latter narrates a case in which (after an unavailing round of bromides, etc., etc.,) he used two pellets (No. 35) medicated with the mother-tincture, every four hours. "The spasms, which seemed to involve every flexor of the body and nerve in rapid succession, ceased immediately with the beginning of the use of the medicine, and from that time (June 1st) to this (Feb. 1st), there has not been the least sign of an epileptic seizure, although the patient still takes the little pills twice daily."

He also mentions a peculiar circumstance in connection with the remedy in this case, viz., "The patient was a young lady of rather slender build. About one week after she had begun taking two of the pellets every four hours she complained of a headache and full feeling in the head, resembling the headache from glonoine." A reduction of dose from four to one pellet dispelled the headache, and as the increase of dose again brought it on, it was permanently reduced again. Dr. H. concludes from this that "the drug causes a determination of blood to the nerve centres, thereby overcoming the anæmia, on which, I believe, epilepsy depends."

This view is corroborated by its action as described in the cases of poisoning by this plant, described by Dr. Bloc, (*British Journal of Homœopathy; Art Medicale; Dublin Medical Journal,*) and quoted at much length in *Hale's New Remedies*, Vol. II. Therapeutics, and by the Morbid Anatomy, as revealed by a large number of both human and animal post-mortems, thus formulated:

"Effusion of bloody serum and sometimes of blood at the occipital foramen. On cutting the meninges, the veins of the pia mater distended and highly arborescent at the edges of the convolutions; apoplectic foci in the cerebral mass, which is strongly ingested and speckled (piqueté). The annular protuberance, medulla oblongata and peduncles of the cerebrum and cerebellum inflamed, and present, especially the latter, a certain degree of softening. Severe effusion in the cellular tissue beneath the arachnoid, the ventricles and at the base of the brain. The sinuses of the dura mater distended with blood. *Spinal cord.*—The integuments strongly ingested; the vertebral sinuses filled with blood, soft and fluid. Medullary substance red and congested."

There seems to be, indeed, a very perfect consensus of opinion among all who have had the opportunity of studying these toxic cases, that the œnanthe crocata, and *especially the root*, gives rise in man to all the symptoms of epilepsy.

Dr. Henderson says, "I have used the drug in two other cases beside the one just described with like results. One of the cases has been a confirmed epileptic for nine years, and has become almost an idiot; the spasms have ceased and he seems to be in a fair way to recover. I am now using it on a pauper at our county farm, who has been an epileptic for thirty years, and has been in the insane asylum on two different occasions, and has each time been sent back to the county as an incurable. I have been treating him but a short time, and the prospect for a cure looks very favorable." He adds, "It must be given in very small doses."

HENRY R. STILES, M.D.

XUM

NEUROLOGICAL NOTES.

WE can hardly realize that six months have slipped away since we last contributed our jottings to THE TIMES under this head. Mean time, a large amount of neurological literature has accumulated upon our hands, of which we can scarcely hope to be able to give more than a glimpse to the busy practitioner who may turn over these pages. First, we have the July and October numbers (1885) of *The Alienist and Neurologist*, as usual full to overflowing of good things. Pathologists will be interested in the Italian Professor Golgi's "Study of the minute Anatomy of the Central Organs of the Nervous System;" in "Cerebral Lesions in the Chronic Insane," by Dr. Allison, of Willard Asylum;" in Prof. Luciani's "Formations of the Cerebellum;" in Dr. Spitzka's "Relations between the Symptoms and the Cord-lesions of Posterior Spinal Sclerosis;" and in Dr. Wilmarth's "Notes on the Pathology of Idiocy," in the July number, and in the October number by Dr. Spitzka's article entitled "How shall the Student of Psychology Examine the Nervous Centres Post-Mortem?"

Those who, from humanitarian as well as scientific tendencies, are considering the great problems of asylum management and improvement, will be interested in Dr. Godding's article on "The Recognition of Classes of the Insane in Asylum Construction," and Dr. Callett's "Report on the Asylum Treatment of the Insane," in the July number. "A Year's Scientific Progress in Nervous and Mental Diseases," by Dr. L. A. Meriam, of Omaha, Neb., in the October number, we consider as an extremely valuable article, since it furnishes, at a glance, exact information as to what has been especially studied and observed by eminent students in this department, throughout the world, during the past year. Medico-legal students will find food for consideration in Dr. Morris' articles (in July number) on the Dr. L. M. Beach and the Yseult Dudley trials, and the editor's selections and editorials present a collection of information in the various departments of mental science which is not equalled by any other journal.

The Yseult Dudley case also comes to the front in the *Medico-Legal Journal* (September), in the form of an article by Dr. Sankey, of London, and an able discussion at one of the society's meetings, by Drs. Carnochan and Clark Bell, Esq. The latter gentleman also writes well on the question "Shall we hang the insane who commit homicide?" an article suggested by Dr. Beach's trial. "Legislative Lunacy Reforms," especially in Illinois and Michigan, have much prominence assigned them, and "Insanity as a Plea for Divorce or Nullity," by Dr. Geo. H. Savage, Medical Superintendent of Bethlem Hospital, London, is a thoughtful and important article, which demands general consideration at the present time. It refers mainly to the well-known English cases of Hunter *vs.* Hunter, at Edney; Cannon *vs.* Cannon, at Smalley, and the more recent case of Earl Durham against his newly wedded wife.

We quote the following, the *italics* being our own:

"Marriage is a contract, but being a contract in flesh and blood, it has to be considered somewhat differently from more ordinary contracts. Many suggestions have been made from time to time as to the propriety of divorce in cases in which one of the parties has become insane, but it seems to me that it will be very long before any civilized nation will accept insanity as a plea for divorce, when the insanity has developed after the marriage contract. One of the foundations of the marriage contract is that it is for 'better or for worse,' the betterness or worseness being distinctly referred to not only as 'for richer and poorer,' but also as to health and sickness. And it would be as reasonable to expect divorce from the heiress whose trustees have made away with her fortune as to expect one from the woman who has become insane.

"Doubtless there are often hardships resulting from the marriage contract; the beautiful girl may become the ugly matron; the sweet girl of seventeen may be a virago at forty, and both these changes may be more or less the result of physical disorder or disease.

"In fact, these changes may be much more readily traceable to bodily disease than can many forms of insanity. Other changes of a physical or intellectual nature may equally with insanity unfit the wife to be the helpmate to her husband, yet I never met with any one who seriously suggested that divorce should be allowed in cases of cancer, or of paralysis, of plethora, or bad temper.

"I pity the man or woman who is tied for life to an insane partner, yet *the good of the whole body politic has to be weighed against individual suffering.* As to this point, I must say that I see no chance of freeing, with safety to society, the partner with an insane companion from his contract. For, in the first place, this could not be done unless the patient was adjudged incurable. *And few men of experience would dare give an opinion of absolute incurability, except in cases in which death would soon give the divorce. The older I grow and the more cases I see, the less dogmatic do I become in giving absolute opinions of incurability of insanity as seen coming on in young middle life.*

I have seen cases discharged recovered, and remain well, after being in asylums for over twenty years. I have seen an intellectual second summer arise when perpetual winter was certainly to have been expected.

"With such experience, I should myself—if called to give an opinion as to the absolute incurability of a case—only feel justified in giving it when general paralysis, senile dementia and idiocy were present, for even epilepsy may pass off in time."

Dr. Savage says that the disposition among the members of the English Bench and Bar is to consider that "unless the party said to have been unable to enter into the contract was markedly insane at the very time the marriage was performed, the marriage will be upheld. No antecedent insanity will avail; no insanity coming on very soon after the marriage; not even the fact that nervous, or even insane symptoms were present both before and after the marriage, if at the time the person was, to all appearances, able to understand the nature of the contract," and quotes the dictum of Sir J. Hannen, "that though the person was suffering from the earlier symptoms of a mental disease, which steadily progressed from the time of its onset, yet if she understood the nature of the contract sufficiently, the marriage must stand."

Dr. Savage holds that if a marriage has been contracted in which either one or the other of the parties has not been in a mental state to judge of its importance, or character; or through misrepresentations or concealment of facts by which one or the other party may have been misled, that "there ought to be some way of voiding the contract." He then goes on to say: "I believe that, with the restrictions of modern society, it is quite possible for a man and woman to have passed through a period of acquaintance, and later of engagement, and to be married, without some forms of mental disorder having been detected, though existing in one of them. After marriage the insanity may become more marked, though present before. I can understand a person having chronic insanity, with some fixed delusions, which was never noticed before marriage by the partner.

"It is not too much to suppose [an evident allusion to the Earl Durham case. H. R. S.] that a man may be fascinated by

the physical beauty and placid calm of a girl, whose whole demeanor struck him as a pleasing contrast to the giddy, chaffy, slangy young lady of the period. Having fixed his affections on this being, so splendidly beautiful, though icily *nil*, he adores the very shyness and coyness of his bride, ignorant that she is going through the whole courtship as a kind of penance and with the indifference of early melancholia.

"In such a case the ceremony of marriage will usher in a life of misery, for almost certainly the bride will decline to fulfil one of her earliest functions, and the marriage will be (for a time at least) not consummated.

"This, I have said, is conceivable, and I may add that I have met with several cases very like this.

"There is a special type of feminine beauty which, in my experience, is associated with little or no sexual desire, and such cases easily pass the border-land into insanity. In some other cases, a simple delusion may remain after severe or acute mental disorder, and may not be detected until after marriage. Or again, a woman subject to recurring attacks of insanity may marry during one of her periods of health.

"This last supposition is not fanciful, for I know several girls, now chronic lunatics, who, between attacks of insanity, married. Moreover, many of the more unstable, neurotic girls belonging to this class are brilliant and attractive.

"Surely, in such cases as those just referred to, it would be very unjust to compel a man to keep to his bargain if he married ignorant of the fact that his wife was subject to hidden delusions, or to recurring attacks of acute insanity. If the above is admitted, another question arises which, though nearly allied, is very different in its bearings. If divorce should be obtained from a woman who was married in one of the periods of health or rest between periods of mental disorder, these alternating periods being shown to be part and parcel of the same diseased process, then why should divorce not be allowed (and such cases are by no means rare) where persons have had several attacks of insanity, from which they have recovered, but which have left them more liable to recurrence? Why should not divorce be allowed when one of the contracting parties has concealed the fact that there have been previous attacks of insanity of a kind likely to recur? I know it will be maintained that the law does not and does not wish to consider any theoretical question as to the relationship of contract to disease in general, but that all it has to concern itself about is whether the parties are both able to understand, at the time of contracting, the nature of the act. This may serve the *law*, but we desire to look from the vantage ground of medical knowledge combined with legal experience, and I think a time will come when divorce will be permissable when it can be shown that one of the parties has concealed the fact of previous attacks of insanity having occurred."

The whole article is among the most valuable and interesting of the many which Mr. Bell so skilfully purveys for his pet journal.

"The Prevention of Insanity," by the veteran Dr. Nathan Allen, of Lowell, Mass., although published in 1883, has a perennial value, because of its tendency to fix the mind of both public and profession upon the old axiom, which men are too apt to forget, that "an ounce of prevention is worth a pound of cure." In regard to this point, and the "Relations of Insanity to the Medical Profession and Lunatic Hospitals," Dr. Allen has long and forcibly written and labored. We have an idea that his views are not altogether palatable to most asylum superintendents and officials, but he considers these matters not only from an outside but from a much broader point of view than most of these gentlemen can occupy, and we believe that the medical profession generally, and the people, will agree with his views.

The *New York Medical Abstract*, for October last, presented its readers with an especially valuable and *recherche* collection of articles in the department of mental science, viz., a translation of Dr. Belugon's "Research into the Causes of Locomotor Ataxia," (his conclusions being thus formulated, viz., "1. No single cause can be indicated as having a monopoly of the elements necessary to the bringing about of ataxia, and no one of them is necessary to its production. 2. The elements which have the greatest importance in its genesis are syphilis, a nervous heredity, rheumatism and functional abuses. 3. In almost all cases, besides other ætiological circumstances, functional excesses and the nervous condition from overwork are necessary causes, and contribute, in a manner more or less marked, to the evolution of the disease.")

A "Case of Moral Insanity, or Congenital Moral Defect," by Dr. D. Hack-Tuke, of England; and a most exhaustive (and illustrated) "Study of the Diseases of the Circulatory System in the Insane," by Dr. T. Duncan Greenlees, of the Cumberland and Westmoreland Asylum, England; and "The True First Stage of General Paralysis of the Insane," by Dr. Sutherland. All these articles are of an exceedingly practical nature.

H. R. S.

SOCIETY REPORTS.

THE Medical Society of the State of New York held its eightieth annual meeting in Albany, February 2, 3, 4, Dr. Vander Veer, of Albany, in the chair. The meeting was unusually well attended by the representative men of the profession, the papers and discussions covering a wide range of investigation. As the most interesting of these papers are given to the public through the medical journals, the authors are sure of reaching a very much larger number of readers than could possibly be gathered at meetings of the society, and are stimulated in devoting ample time and careful study to their production. The paper by Dr. Lawson Tait is an admirable one, and such as no other man could produce, because his line of thought and of work is peculiar to himself, and because no other gynæcologist has reached the perfection of diagnosis and the uniform satisfactory results which attend his work.

Dr. Vander Veer's address was an admirable presentation of the subject of the "Water Supply of Cities and Villages."

Dr. Ely, of Rochester, was elected President for the ensuing year.

Dr. Jacobi read a paper on "Papain or Papayotin." After referring to the chemistry of this substance, which is obtained by adding alcohol to the juice of the papaw plant, the physiological action was described. Its therapeutic effects were next considered. It has been found innocuous when taken internally; but when injected subcutaneously, it is followed by dangerous symptoms of paralysis of the heart and nervous system. Its effect has been compared to that of pepsin and pancreatin, with this exception, that it is effective in smaller doses. It is useful in alimentation.

Diphtheritic membranes are dissolved by it in a few hours. Several cases of diphtheritic deposit were described as showing the effects of this drug, one part to four of water and four of glycerine. In these cases the membrane was softened and dissolved, and disappeared within forty-eight hours. He exhibited specimens of egg, meat, and cheese digested by a solution of papayotin of the strength of 1 to 250.

XUM

The thirty-fifth annual session of the Homœopathic Medical Society of the State of New York was held in Albany, February 9 and 10. The President's address was short, but contained several important suggestions, clearly and forcibly stated, on the duty of the society to the profession and the public.

On account of the partiality shown by the State Board of Charities to the old school of medicine in its legislative work, its mischievous intermeddling, its lack of ability and utter uselessness as a State organization, the President recommended it be abolished, in accordance with Gov. Hill's suggestion in his inaugural. The suggestion was negatived on the ground of a lack of sufficient information by the society upon the charges made to vote understandingly.

The suggestion of making the law of 1872 obligatory, allowing to each school of medicine a board of medical examiners, was approved. The society also approved the suggestion to allow the authors of all papers accepted by the society to publish them as best suited their judgment. Heretofore these papers were not permitted to appear in any medical journal until after they had been published in the transactions. It was believed the course now adopted would stimulate the members to give additional time and thought to the preparation of papers, as through the journals they would immediately reach a large audience.

The President recommended that the clause "I hereby acknowledge that I believe in the law of similia similibus curantur" be stricken from the by-laws as a requisite for membership, so that any regularly educated physician could be admitted unconditionally. Our friends in Massachusetts, he said, had taken the initiative in this matter, and opened wide the door of their State Society to men of diverse medical opinions, and to the full and free discussion of every matter pertaining to medicine. In section 11 of its by-laws it says, "This society demands for itself absolute liberty in science, and hence requires of its applicants for membership no creed or confession of medical belief, but only the expression of a willingness to act for the furtherance of its declared objects." The stand taken by Massachusetts, a State foremost in culture and advanced thought, was so eminently practical and dignified, and in such strict conformity with the objects of scientific organizations, that he felt New York would be wise in following her example. The recommendation called forth no discussion, but was promptly negatived.

Dr. Paine's resolution that attenuations above the 12th were not homœopathic, which he had unsuccessfully presented at six successive meetings, was tabled indefinitely, after a brief discussion. The position of Dr. Paine was that the limit of divisibility of a drug was reached before the 12th attenuation, and that beyond that there could not be a single molecule, however small, of the original drug. If something else was developed by the process of dynamization it was not the original drug and, therefore, could not be homœopathic to the pathological condition produced by that drug. The point made by those who opposed this resolution was that it interfered with the liberty of thought and scientific investigation. Dr. T. F. Allen, who has been a teacher of materia medica for several years, and a compiler of an encyclopædia of drug provings, said that he did not know that he believed in dynamization, he did not know that he believed in potencies—in fact, he was a kind of agnostic so far as medicine was concerned, but the American Institute had taken up this question and were investigating it in such a way as he hoped would lead to conclusive results. He was opposed to the resolution because it interfered with the liberty of thought and would prevent the discussion of scientific subjects in a scientific society. The society which had just decided by a unanimous vote to make a single principle the shibboleth of its faith, and bind its members by a creed which would certainly interfere with absolute liberty in science, seemed to coincide with the opposition on this question so far as to give the resolution a prompt negative. At a subsequent period of the convention the society so far reconsidered its previous action as to appoint a committee consisting of Drs. Wright, Paine and Brown to report at the next meeting upon a percentage of cures, obtained from cases treated. In this way a comparison could be made between the cures made by high potencies and those from other forms of treatment, and where left entirely to nature and good nursing.

Dr. Guernsey, from the Committee on Medical Education, in his report said: "It is doubtful, Mr. President, whether all that has been said or written during the past few years upon the subject of the ways and means of inaugurating a higher standard of medical education has produced the slightest effect. Societies have discussed the subject, medical journals have been filled with able articles, and legislative help invoked in the different States at almost every session for the past twenty years. Words, words, and that is all; words which might just as well have remained unspoken and efforts untried. The spirit of scientific investigation so active everywhere brings to light new truths and develops new principles just as fast as the public are able to comprehend and utilize them. We are to-day, in point of practical knowledge pertaining to our profession, a long way in advance of even twenty years ago. The standard of medical education is being constantly elevated, and every year advancing higher and higher, not, however, by legislative enactments, but by that spirit of inquiry, that patient, intelligent work which pushes its investigations into every domain of nature, and is satisfied with nothing but the fullest and most thorough scrutiny. Under the influence of this spirit the profession is constantly advancing, and is every day becoming less partisan and more united, as its investigations are less theoretical and more thorough and scientific. In the light of these investigations, opinions *must* change, and the honest conviction of to-day may next week or next year be proved to be altogether wrong. Within the past few years the whole science of chemistry has had to be rewritten, and those of us who studied it not many years ago have had to unlearn what we then learned and start afresh upon an entirely new basis. The imponderable gases we find now can be liquefied, and some of them even solidified, hydrogen turning out to be a mineral and electricity evolving from oxygen ozone. In the study of astronomy new principles have been evolved, new truths discovered through which the whole science has been reconstructed and investigation turned into new and more fruitful channels. The spirit of judicial investigation, of patient, untiring intelligent labor, now everywhere seen and felt in the ranks of our profession, is rapidly evolving from empiricism, theory, conjectures and partially proved truths, the substantial and enduring basis of a scientific medical profession, and the more this spirit of judicial inquiry prevails the more antagonism melts away and the closer the lines of investigation converge, until at last they unite, the same broad path opening before all. No sooner is science enlisted in any investigation than at the right time, when the people are prepared to receive and understand the great truths revealed, the men and the means are forthcoming to develop them, make them understood and to utilize them in the work of science and for the public good. Men who have amassed riches by honorable labor place their wealth at the disposal of science, and observatories are erected and furnished with instruments; hospitals are built and laboratories

XUM

constructed with every device which science can suggest for practical study. The attention of the medical world is called through Huxley and Tyndall and Koch and others to germ life as the seed of disease, and forthwith one of New York's wealthy men places his thousands at the disposal of science for the construction of a laboratory for the more careful study in this department, hoping that through the culture and study of the lower forms of germ life the cause and cure of various forms of disease can be reached. Upon the heels of the erection of the Carnagie laboratory in the grounds of Bellevue Hospital comes the gift of half a million of dollars to a medical college for the erection and furnishing buildings for its work, and another gift, by husband and wife, to the same institution of a magnificent building, richly endowed, to be used as a maternity, serving a double purpose, that of a great and much needed charity and a practical school of midwifery. Thorough instruction in all the departments of our profession will naturally draw to the institutions where this can be obtained men of the most intelligence and the most devoted to their work—men who will carry with them into their profession the close and critical habits of study of their student life, and garner in the great field of practice a rich harvest of well-authenticated facts and practical results.

We repeat, then, that our profession will advance into broader fields and reach better results by relying upon individual and united work, each giving his best effort, his ripest thoughts to the work which opens before him, than by formulating rules in societies or begging at the gates of legislative halls. There is a work for each man to do, and if that work is well done the possibilities of the profession increase with each generation. In this age of competition no man can stand idle. He *must* advance or the great tide of rushing life will sweep over and beyond him, and institutions and individuals will be compelled by the law of necessity to meet the demands of a progressive age. The time is not far distant when science will unite in one common cause what have been the warring factions of a great profession, with liberty of thought and mutual respect for all. Each faction by working in its own peculiar way, has been of great use by bringing into distinct prominence some great truth and showing its possibilities, and when these truths are recognized by all as an integral part of medical science, the old organizations will have performed their parts, and the necessity for them as distinct organizations will have ceased. When that time comes, and I believe the day is not far distant, the public and the profession will alike demand that an examining body shall pass upon the fitness of every student who applies for admission into the ranks of our profession. And this, not because examinations are not now sufficiently severe in all our colleges, but that the Regents might be assured that no man was deficient in a thorough understanding of the ground work of his profession. And this information would be reached less by an examination in those minute points which are learned only to be forgotten, which lumber up the mind without doing any good, examinations which hardly a professor could pass in any chair but his own, than by a few practical questions which would disclose the principles which underlie our work the physiological action of remedial agents, and a manipulation of the tools of our profession. Until that time comes we can see no use in meddling with the question. If we are to have a mixed board in which both schools are recognized by name we shall be infinitely worse off than now with our college examinations and an independent examining board for each school.

In conclusion, Mr. President, your committee are firm in the belief that the millennium in our profession will be more speedily reached than in any other way when each individual member does his utmost to find out the truth and utilize it with all the energy of his nature in the legitimate work of his profession.

In the evening Prof. H. F. Biggar, of Cleveland, delivered an interesting address upon the progress of medical science. The lecturer, in the language of the Albany *Journal*, "seemed to be a professor at large in the field of medical progress, and ranged at will through the whole field of medicine, surgery and pharmacy, regular and irregular," giving due credit to all.

Papers were read during the convention upon subjects connected with almost every department of our profession, very few strictly relating to the homœopathic therapeutics, and the majority of them, so far as doctrine was concerned, such as would have been acceptable in the convention of the week before.

Dr. Henry C. Houghton, of New York, was elected President, and Dr. H. M. Dayfoot, of Rochester, re elected to the office he has filled so acceptably. The Society will hold its semi-annual meeting at Niagara Falls.

OBITUARY.

Dr. Alfred C. Post died recently in this city of cystitis, in his eighty-first year.

Dr. Post was a surgeon of much eminence, and at the time of his death held the chair of surgery in the University Medical College of this city, to which he was appointed in 1851.

Dr. Post gave special attention to ophthalmic, aural, orthopædic and plastic surgery, in which field he has left a record of many delicate and successful operations. He published a book on strabismus in 1840, which had a wide circulation. It had an appendix on stammering, of which Dr. Post had also made a special study. He performed a surgical operation to relieve stammering for the first time in America. About this time he devised a new method of performing bi-lateral lithotomy, which soon became used everywhere by surgeons in this operation. As a lecturer Dr. Post was always exceedingly popular with students. He had a wonderful knowledge of facts, which were always expressed in terse language. The dry facts of anatomy were interspersed with amusing anecdotes and lively illustrations. It has been his custom for many years to hold a clinique every Saturday. He was charitable, conscientious in the discharge of his duty, ever ready to explain a hidden difficulty to his students, and made every statement so clear that it could not be misunderstood. He took special delight in curious cases and explored unknown fields in surgery with great success.

TRANSLATIONS, GLEANINGS, ETC.

A Case of Enucleation with Replacement of the Eye by that of a Rabbit.—This novel operation has again been successfully performed by Dr. H. O. Bradford, who reports in the *Boston Med. and Surg. Journal*, Sept. 17, 1885, the case of a man in whom one of the eyes had become atrophied from injuries received in early childhood; enucleation was performed, and the eye replaced by one removed from a rabbit, the nerves and muscles being all sutured in the proper position. The operation proved highly successful, the muscles acted satisfactorily, conformation of the eye being good, and the cornea gradually clearing up. Vision was, of course, not expected in the transplanted eye, for the optic nerve was composed principally of connected tissues and diminished to half its ordinary size. The patient, however, obtained a very satisfactory artificial eye.

XUM

THE BEAUTIFYING OF THE SKIN.—In the work on diseases of the skin, edited by Prof. H. Von Ziemssen, Dr. Heinrich Auspitz, of Vienna, makes the following observations upon this subject :

1. A healthy integument is not necessarily beautiful. Even if all requirements concerning diet, residence, atmospheric and climatic conditions, etc., are carried out, the complexion is often extremely bad. The general condition of health has no influence upon the beauty of the complexion, though it has upon the health of the skin.

2. Cleanliness is a *sine qua non* of the beauty of the complexion, though it does not play a great part in the health of the skin.

3. Water is serviceable to the skin only in moderate amounts and at moderate temperatures. Very cold or warm baths, when used to excess, diminish the elasticity of the skin and its power of resistance to external irritants.

4. Distilled and so-called soft water are more suitable for washing, and less irritating than hard water.

5. The hard soda soaps are usually preferable to the softer potash soaps for toilet purposes. The quality of soaps depends upon the quality of their constituents and the thoroughness of their saponification. Good soaps must not contain free alkali, or any foreign irritating substance. The addition of moderate quantities of perfumes does not materially change the quality.

6. Simple, finely-ground powders, such as starch, magnesia, etc., are entirely innocuous, and often act as a useful protection against external irritants.

7. Frequent application of alcohol abstracts the water of the skin, makes it dry and brittle, and impairs its nutrition. This is also true of glycerin. All toilet washes containing alcohol to any considerable extent should be avoided.

8. This is true to a still greater extent of other additions to washes, such as corrosive sublimate, mineral acids, certain metallic salts, etc.

9. Camphor acts merely as a bleaching powder. This is also true of benzoic resin, sulphur flowers, and substances containing tannic acid.

10. The use of sweet-smelling oils and fats should be employed to a greater extent than is now done for toilet purposes.

11. This is particularly true with regard to the growth of the hair. The nutrition of the scalp should be increased by the rational application of fat (for example in the form of oil baths by means of the application at night of a sponge soaked in oil upon the scalp), and the greater use of simple pomades. This should be applied to the roots of the hair rather than the shafts.

12. Substances should be avoided, or sparingly used, which abstract water from the skin and the roots of the hair.

COLD WATER IN LABOR.—(Dr. J. W. Trabert, *Medical and Surgical Reporter*, Nov. 15, 1884.) The only reliable oxytocic that I have found in my obstetrical practice is cold water. Its efficacy in exciting contraction of the uterus in post-partum hemorrhage is well established, and its superiority over other agents in hastening labor with less danger is shown in the cases reported by Dr. H. Garvin (who was the first to call attention to its efficacy in this direction), and also in several which have occurred in my own practice. I think if this method was more frequently employed we would have less rupture of the os uteri or perinæum, and less post-partum hemorrhage. I cannot better explain the action of cold water to the uterus than in the language of Dr. Garvin : Cold, when brought in contact with the surface, though locally depressing, through its communication with the nervous centres, acts as a stimulant, affecting the whole system or only certain organs, according as it is generally or locally applied. All are familiar with the effect of cold water sprinkled upon the face in attacks of syncope, also its more powerful stimulant influence upon the brain in narcotic poisoning. It does not act as ergot, producing by its toxical influence on the nervous system an abnormal and dangerous stimulation of the parts which are affected by it, but the reverse ; the dormant or flagging powers are, as it were, awakened to renewed action, a normal state of affairs is reestablished, and the functions are carried on as they were previous to their failure. The following mode of using this remedy is recommended : The water should be cold ; it is not necessary always to have ice water, as Dr. Garvin suggests, but if convenient is preferable. A towel should be dipped in it and wrung until only sufficient water remains to wet the parts to which it is applied ; this should be quickly placed upon the abdomen, so that as much of the cold will remain as possible ; the cloth should be changed every five or ten minutes, or as soon as it becomes warm.

RUSSIAN BATHS.—According to Dr. V. V. Godlevsky (St. Petersburg Inaugural Dissertation), Russian baths are indicated: (1) in chronic, muscular, and articular rheumatism, as well as in gout : (2) in secondary and tertiary forms of syphilis ; (3) in scrofula : (4) in obesity, and in plethora from over feeding and sedentary life : (5) in the initial stages of catarrh of the nose, throat, bronchi, lungs, bowels, and bladder : (6) in chronic catarrh of the external auditory meatus, (as recommended by Dr. Strong), the pharynx, tonsils, and nose ; (7) in chronic inflammation of the spinal cord and its membranes (as recommended by Bartels, Frey, and Heiligenthal), and in hypochondriasis: (8) in chronic congestion of the liver, spleen, stomach, bowels, as well as in the algid stage of cholera ; (9) in rheumatic, scrofulous, and syphilitic disease of bones; (10) in intermittent fever (in the stage of rigor); (11) in apyretic cases of ascites and serous pleuritis, and non-cardiac dropsy ; (12) in hydrophobia (Sanjez, Buisson, Turkish baths in hydrophobia were recommeuded by Dr. R. Neale ; (13) possibly, in diabetes, as well as (14) in cases where the formation of biliary and cystic calculi may be suspected.

The contra-indications for Russian baths are as follows : (1) all rather prolonged acute febrile diseases ; (2) tendency to hemorrhage ; (3) general weakness and exhaustion after acute diseases ; (4) acute affections of the eye and ear ; (5) uncompensated diseases of the cardiac valves, fatty degeneration of the heart, arterio-sclerosis of high degrees, and aneurism ; (6) tendency to pulmonary and cerebral congestion, plethora of higher degrees ; (7) considerable emphysema, phthisis in the last stage ; (8) obstinate constipation from atony in the intestines ; (9) pregnancy with tendency to abortion ; (10) very hot Russian baths are contra-indicated, also, in the cases of very old people and infants.

A PAINLESS METHOD OF INTRODUCING THE CATHETER.—The plan suggested by Dr. J. H. Berst, in the *Therapeutic Gazette*, is the spurting of a few drops of a four per cent. solution of cocaine mur. into the mouth of the urethra, and allowing it to seek the deeper parts of the canal by gravitation. This can be accomplished with an ordinary medicine dropper, the point of which has previously been glazed by holding in the flame of a spirit lamp,

By this simple method of producing local anæsthesia the writer has been enabled not only to painlessly cauterize his patients, but in four cases perform internal urethrotomy, and carry out the after treatment, viz., the daily introduction of a full size sound, without causing any pain whatever.

XUM

THERMIC FEVER OF INFANTS, OR SO-CALLED SUMMER COMPLAINTS.—It is notorious that in our northern cities the infant mortality rises most extraordinarily and most abruptly upon the occurrence of a very hot spell of weather, such mortality being due to the so-called entero-colitis, the symptoms of which may be summed up as high fever, dry tongue and mouth, rapid pulse and respiration, intense thirst and vomiting, purging of greenish watery fœcal or serous matters with undigested particles of food, and more or less apparent evidences of cerebral disturbance, such as insomnia, headache, contracted pupils, delirium, and, finally, coma. In some of these cases the bodily temperature of the little sufferer rises to a point almost reaching the maximum attained in the sunstroke of adults, and we well remember how we used to be taught to explain to the mothers under these circumstances, that the disease had gone to the child's head and was hopeless. To Dr. Comegys, of Cincinnati, belongs the great credit of having first called attention to the fact that these cases are to be relieved, not by calomel or astringents or any other drug which relieves inflammation of the intestines, but by external use of cold water. They are, in reality, forms of thermic fever, the intestinal condition being no more a primary disease than is the coma of adult sunstroke a primary condition; if this fact were clearly recognized by our practitioners of medicine, the mortality rate in our large cities among children during hot spells would be enormously reduced. Dr. Comegys practised cold affusions, but we do not think these have any advantage over the cold bath, and are more trouble. The mothers accustomed to the powders, pills, and nauseous mixtures of the older physicians, usually object to the withdrawal of the medicine, but especially are they terrified by the use of the cold baths, and the infants themselves are usually prone at first to protest with what little physical strength they have against the plunge into the cold water; but when it has been once seen that the child that has been tossing for nights, moaning and sleepless, becomes quiet, and on being taken out of the bath falls into a peaceful slumber, the opposition of the mother soon becomes turned into a grateful confidence. In our own experience even nursing babes soon recognize instinctively the effect of the bath, and older children become eager for it. There is, therefore, after the first essay, usually no trouble in carrying out the plan of treatment; indeed, not rarely care must be exercised to see that the bath be not given too frequently. It must be remembered that the object of the bath is to reduce the temperature of the child, and that, therefore, unless the bathing is done with sufficient frequency to keep down the temperature it will not be efficacious; but, on the other hand, it must not be forgotten that it is very possible to overdo the treatment. The thermometer should be freely employed, and the practitioner be guided by its warnings. If two baths in the twenty-four hours should keep the temperature near normal, two are all that are necessary. If eight baths are required, eight should be given.—*Therap Gaz.*, *July* 15, 1885.

GUACO.—The mikania guaco is a South American plant, belonging to the order of climbing perennials, of which condurango was at one time a noteworthy example in this country. In its native habitat it enjoys an extensive reputation as a remedy for snake-bites, stings and bites of insects; hence it is not strange that it should also be employed for cancer, syphilis, chancres, obstinate ulcers, scrofula, etc. The provings and observations of Dr. Elb indicated the importance of guaco in spinal diseases, spinal irritation, partial paralysis, and especially in the paretic condition following apoplexia. He found it "almost specifically helpful in robust, not anæmic, ruddy persons, inclined to congestions, excitable, especially in males, when the spinal disease has not been caused by the loss of fluids or depressing causes, in persons disposed to hæmorrhoids, when the pains, with only a slight feeling of weakness in the lumbo-sacral region, are mostly in the upper part of the vertebral column, mostly in the upper part of the vertebral column, mostly aching, drawing, or sticking in character, very severe, with, at the same time, only pains in the extremities, but no paretic conditions, and the parts affected are extremely sensitive to pressure." In 1853, some provings of guaco were made by members of the Massachusetts Homœopathic Medical Society. Only a few well-marked symptoms were obtained, which have never hitherto been published. Dr. W. F. Jackson, after taking, at various times, one hundred and twenty drops, had unusual flow of urine, which was cloudy, with excess of phosphates; specific gravity, 1.024. He had pain over region of bladder, and feeling of weight and weariness through hips and lumbar region. Rheumatic pains, to which he was subject, seemed to be increased while taking the drug; but he was unusually free from them for some months after the proving. Dr. T. B. Wales had some pain and rumbling of bowels, followed by thin, watery discharges. The writer took two drops at a time every four hours, from 8 A.M. to 8 P.M., and again on retiring, about 11 P.M., for three days. On the morning of the fourth day, he was awakened at 4 P.M. with pain, and sudden call to stool of dark-brown fæcal matter, thin and watery; slept till 6 A.M., when he had another stool, sudden, forcible, profuse, but with the appearance of rice-water; had some pain in the sacrum and back afterwards, with feeling of weakness and fatigue. The tongue was not coated, nor the appetite impaired; no marked change in urine. The symptoms disappeared gradually in two or three days. Dr. Gregg prescribed guaco, with good results, in the diarrhœa of children, and especially in a form known as cholerine diarrhœa, which prevailed extensively in the summer of 1854. I found this remedy very serviceable in thin, watery diarrhœa, especially of teething children, also in the continuous and exhaustive diarrhœa of children, with indications of cerebral effusion; likewise in dysenery, with pain in back and lumbar region, accompanied by fatigue, weakness and exhaustion. In persons of hæmorrhoidal tendency, it has proved efficient in arresting a bloody, mucous, or frothy diarrhœa, accompanied by burning pain rather than tenesmus. It is a remedy which for thirty years I have constantly carried in my pocket-case; and I have come to use it in cases of diarrhœa and dysentery more frequently than any other single remedy. In several cases of paralysis following apoplexy it has seemed to exert a most marked and speedy influence in restoring the power of motion. Although not prepared to assert or deny its alexipharmic properties, yet I have sometimes thought it unusually effective in persons with scrofulous or cancerous cachexia. Altogether, I would recommend guaco as a drug well worthy of careful consideration and study.—J. T. TALBOT, M.D., in *Publ. Mass. Hom. Med. Soc.*, 1884.

IODOL.—The greatest objection to the use of iodoform is its intolerable smell and everyone will be delighted if the new antiseptic *iodol* maintains the claims made for it of being an excellent substitute. Over two hundred observations have been made with it in the Royal Surgical Institute, Rome, with the most satisfactory results. It contains 90 per cent. of iodine and is fully soluble in alcohol, ether, glycerine and hot fixed oils.

RESORCIN.—The local application of powdered resorcin is spoken of as a remedy for malignant new growths.

XUM

MISCELLANY.

—The best disinfectants known are sunlight and fresh air.

—A new caustic is made of benzole and calomel, which has proved useful in epithelioma. The pain is said to be slight and brief.

—Dr. Strong, chief of staff of the W. I. Hospital, reports 637 patients treated during the month of January, with 21 deaths, a mortality of 3.30%

Salicylate of Lithia, is recommended by M. Vulpain in the joint pains of rheumatism both in the sub-acute and chronic form. It is given in doses of a drachm a day.

—Dr. Switz reports four cases of lupus successfully treated by lactic acid. It produces very little pain and the healthy tissues may be protected by smearing with oil.

—The Ladies' Protective Association should have great credit for its efforts in protecting the public health against the slaughter houses of the east side of the city. It is prososed to secure legislation in this behalf if necessary.

—If a grain of flaxseed, says the *Med. World*, is placed under the inferior eyelid and the eye closed, it immediately becomes surrounded by a thick mucilage which entraps any foreign body, but soon carries it out from the angle of the eye.

—It is stated by the daily papers that the anti-vaccination crank, who had stirred up most of the resistance to vaccination in Chicago and Montreal, on being arrested was found to have been vaccinated three times within a few weeks.—*Boston Med. and Surg. Jour.*

—It is said that alcohol should not be combined with chloral hydrate, especially when the bromides of potassium or of sodium are present, as under these circumstances the chloral will float on the surface as an alcoholate, and thus become dangerous, unless well shaken.

—A rare and interesting case of recovery from a compound fracture of the skull is reported in this city, in the person of a park policeman. At the end of six months the patient is in his normal condition, after having passed through a course that can well be imagined.

—The "Dry Bread Cure" is the latest craze and it comes from "Lindenweise" It consists of the cold pack, a diet consisting of dry bread, twice a week a little rice and barley, and three times a week Hungarian wine, all to continue for six weeks. In cases of rheumatism, gout, etc., it is said to be effectual.

—The ova of pediculi may be loosened from hair previous to washing by sponging the head or part of the body affected with a mixture consisting of equal parts of vinegar and water. This dissolves the cement by which the eggs are attached to the hairs, and enables them to be subsequently easily removed by soap and water.

—The resignation of Dr. Austin Flint as a Fellow of the Academy of Medicine was recently accepted, and that of his son was accepted several months ago. Now perhaps there will be peace! We had hoped the Academy would investigate the conduct of these members toward their ex-president before allowing them to resign!

—Dr. Brush, who makes such excellent kumyss, has a herd of twenty-three Holstein cows and pays special attention to their food and habits. The following is the diet list: Timothy and clover hay; Indian meal; bran; linseed and cotton seed meal; salt hay; turnips, carrots and beets. Such a *menu* ought to produce a most perfect nutrient.

—The annual meeting and banquet of the Alumni Association of the Hahnemann Medical College of Philadelphia will be held at St. George's Hotel, Broad and Walnut streets, Philadelphia, on March 31, 1886, at 8 P.M. The members of the Alumni are cordially invited to attend.

—The annual report of the eye and ear department of the Buffalo City Dispensary, under the charge of F. Park Lewis, M.D., shows an amount of successful work done which must be highly gratifying to the officers. Between three and four thousand prescriptions have been made during the past year.

—It is reported that 2,417 persons died in this city during last year without having had medical advice. With all our dispensaries and hospitals "free to the poor," there is no need of this. It should be known that a physician in order to certify a death must have seen the patient within twenty-four hours of decease, otherwise it is a case for the coroner.

—Olszewski announces (in *Comp. Rend.*) that he has succeeded, by a modification of the apparatus previously employed by him for obtaining very low temperatures, in reaching the lowest degree so far attained, namely, 225° C. This was accomplished by the evaporation of *solid* nitrogen under a pressure of only 4 millimetres of mercury, that is, practically *in vacuo*.

—Quack remedies are gaining a terrible foothold in this country, and are doing a corresponding amount of harm to the people. It requires only slight endorsements to make them sell, and testimonials are not difficult to obtain. Most people are too ready to take medicines on such recommendations regardless of consequences, and even physicians are careless in their endorsement.

—Spaniards are not generally credited with being in the van of hygienic science, but in one particular they would seem to be in advance of ourselves. A Royal decree has been promulgated ordering the corporations of all towns whose population exceeds 100,000 on the request of the local educational committee, to appoint a medical inspector of schools. The salary is to be fixed by the corporation.

—Small-pox is very prevalent in Vienna; and in consequence orders have been given for the vaccination of soldiers in barracks, and the municipal authorities have issued urgent appeals to proprietors of schools, workshops, and employers generally to have the children, servants or working people under their charge vaccinated. In Berlin, where revaccination is now universal, small-pox has for some years been almost completely stamped out.

—Dr. Bedoin, in a paper communicated to the Belgian Royal Academy of Medicine, on antiseptic dressings suitable for military purposes, said that the requisites to be kept in mind were that any dressing to be used on the field of battle must be simple, occupying but small space, inexpensive, and capable of being used for all surgical necessities. Dr. Bedoin believes that he has found a substance which combines in itself all these requisite qualities, a substance, too, which is well known, easily procurable, and in constant use—being, in fact, no other than blotting or filtering paper. Before being used for surgical purposes, it should be disinfected by a lengthened exposure to a heat of 120° Cent., and by immersion in an antiseptic solution, and afterwards dried. Wounds are dressed by the application of seven or eight layers of this paper, the whole being covered with gutta percha tissue, and a bandage applied. The dressing weighs only about forty grammes, so that each soldier can carry one. In the ambulance this dressing can be applied by the surgeon with any others that it is thought well to employ.

XUM

XUM